

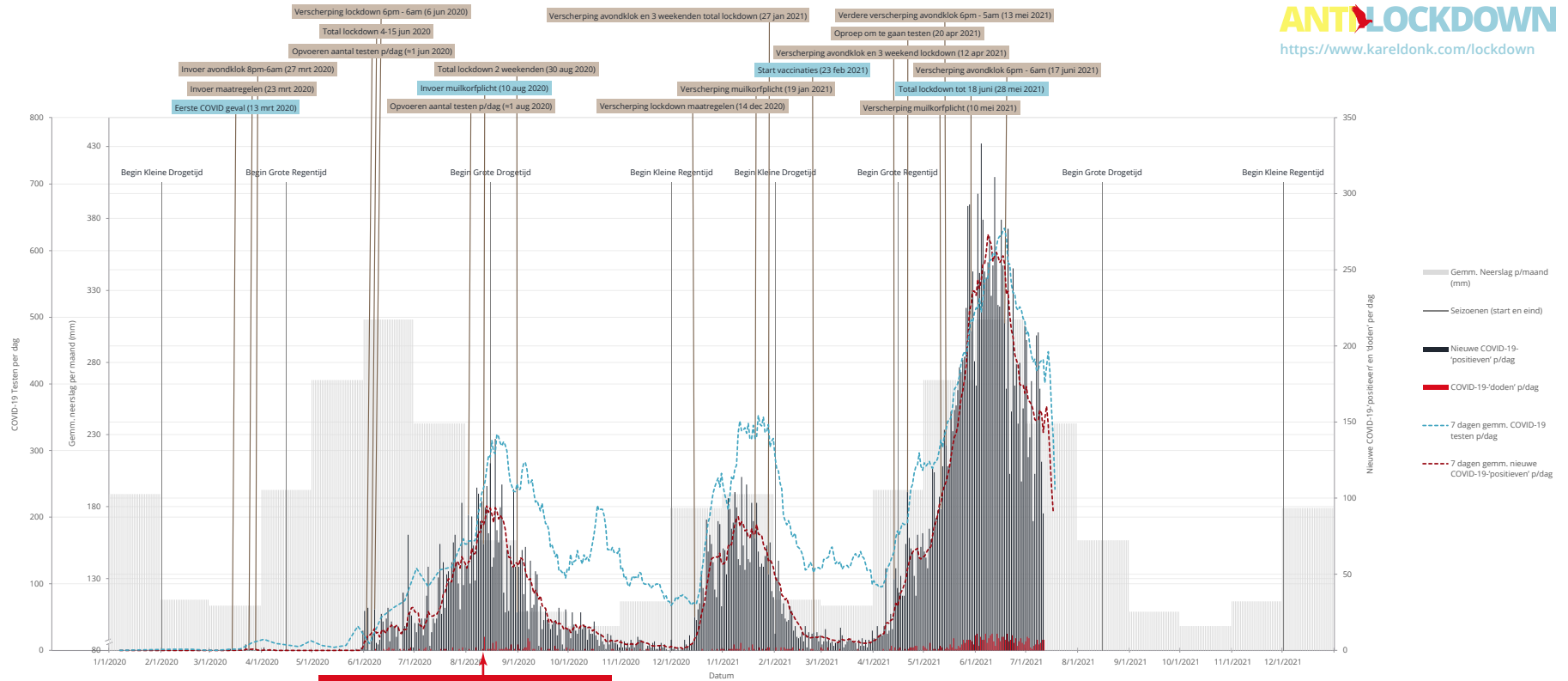


PRODUKTIES BIJ PLEITNOTA

**ANTI
MUIJL
KORF**

<https://www.kareldonk.com/muilkorf/>

PRODUKTIE 6



Invvoer mond- en neusbedekkingsplicht (10 aug 2020)
 Verloop COVID-19-positieven' en 'doden' in Suriname vergeleken met de seizoenen en maatregelen (per 11 juli 2021)

De aantallen COVID-19-positieven' en 'doden' zijn afkomstig van de WHO/PAHO en COVID-19.sr. De hoeveelheid neerslag is afkomstig van de Meteorologische Dienst, station Zorg en Hoop 1961-2005.

PRODUKTIE 7



ANALYSE

Effectieve virusbestrijder of nutteloze muilkorf: wat heeft acht maanden mondkapjes opgeleverd?



Beeld Rebecca Fertinel

De beste maatregel tegen corona volgens de een, een benauwende muilkorf volgens de ander. Vanaf zaterdag hoeven de mondkapjes in de meeste binnenruimten niet meer op. Maar wat heeft het acht maanden lang dragen ervan eigenlijk opgeleverd?

1| Als epidemieremmer

Van alles had men in de Amerikaanse staat Massachusetts al geprobeerd om het coronavirus te keren: schoolsluitingen, thuiswerken, een noodtoestand, oproepen om minder op pad te gaan. Maar uiteindelijk was er maar één ding dat echt hielp, [volgens een analyse](#) in het medische vakblad *JAMA*. Dat was: wegwerpmondkapjes verplicht stellen. Na een week begon het aantal positief getesten in de ziekenhuizen die men onderzocht prompt te dalen.

Mondkapjes golden lang als on-westers, een curieuze gewoonte van smetzieke toeristen uit Azië. Totdat het coronavirus toesloeg: misschien was het gebruik toch zo gek nog niet, opperden sommige wetenschappelijke commentaren voorzichtig. Volkomen logisch immers dat mondkapjes virussen die wegwaaien uit besmette kelen tegenhouden. En dat de drager ervan minder virus inademt: ook dat snapt iedereen.

Maar terwijl men in landen uiteenlopend van Italië tot Duitsland mondneusmaskers ging dragen in winkels en andere openbare ruimten, leek in Nederland vooral OMT-voorzitter Jaap van Dissel er een persoonlijke missie van te hebben gemaakt de mondkapjes te ontraden. Geen twijfel dat ze werken in het ziekenhuis, tussen de patiënten, mits volgens strikte regels gedragen, benadrukte het OMT. Maar om nu zomaar in het wilde weg kleurige lapjes voor te gaan binden, dat wilde er bij de medici slecht in.

En eerlijk is eerlijk: met goede wetenschappelijke redenen. Bij eerdere, systematische studies naar het gebruik van niet-medische mondkapjes tegen luchtwegvirussen – bijvoorbeeld bij pelgrims of in studentenhuizen – komt stevast naar voren dat mondkapjes niet of nauwelijks beschermen.

‘Plus dat bekend is dat de problemen vooral ontstaan op plekken waar mensen intensief met elkaar in aanraking komen. Thuis, op feestjes, of bij het uitgaan’, zegt hoogleraar klinische microbiologie Heiman Wertheim (Radboud UMC), zelf geen OMT-lid. ‘En dat zijn nou net momenten waarop mensen toch al geen mondkapjes dragen.’



MINDER VAAK EEN MONDKAPJE OP

Winkelen in een rustige zaak zonder mondkapje? Dat kan binnenkort weer. Vanaf zaterdag is een mondkapje alleen verplicht in binnenruimtes waar anderhalve meter

afstand houden niet kan, zoals in de trein of in de bus. Een mondkapje blijft ook verplicht op luchthavens en op middelbare scholen.

Vandaar de lijn van het OMT, overigens in navolging van de Wereldgezondheidsorganisatie WHO en de Europese gezondheidsdienst ECDC. Zet liever in op 'bronbescherming': handen wassen, thuisblijven en testen bij klachten, afstand houden, thuiswerken als dat kan. En pas op dat ze die mondkapjes niet gaan gebruiken als excuus om zich niet meer aan de basisregels te houden.

Wat een academische kamergeleerdenlogica, brachten (en brengen) critici daar tegenin. Sinds de eerste massa-uitbraken in de après-skibars van Oostenrijk is immers bekend dat het virus soms kan gaan rondwolven en zich verspreiden voorbij de anderhalve meter. En er is zoiets als 'gemeenschapsoverdracht', besmettingen waarvan de herkomst onbekend is. Die zouden best eens kunnen plaatsvinden in het voorbijgaan, in de supermarkt of op straat - en te vermijden met een mondkapje.

'Wat deze epidemie zo ingewikkeld maakt', zegt Wertheim, 'is de asymptomatische of presymptomatische overdracht, door mensen die druppeltjes met virus verspreiden maar het niet doorhebben. Dat is te lang niet goed genoeg onderkend.'



Beeld Rebecca Fertinel

Toen het virus na de zomer weer oplaaide, bleek het strikt medische standpunt niet meer verdedigbaar. 'Ik ben uiteindelijk

overstag gegaan omdat ik van de discussie af wilde zijn', zegt OMT-lid en hoogleraar moleculaire epidemiologie Marc Bonten (UMC Utrecht) achteraf. 'Niet omdat er zoveel bewijs was dat het fantastisch zou werken.' Zijn Bredase collega Jan Kluytmans (Amphia Ziekenhuis): 'Op een gegeven moment moet je toch een beetje meegaan met de publieke opinie. Maar dat was niet omdat ik dacht: die dingen gaan een heel belangrijke bijdrage leveren.' Van een officieel OMT-advies vóór mondkapjes in openbare gebouwen is het overigens nooit gekomen.

Inmiddels weten we: de cijfers geven Van Dissel en zijn OMT voorzichtig gelijk. In Denemarken bestudeerde men wat mondkapjes uithaalden boven op de andere basisregels: maskerdragers bleken [net zo vaak besmet te worden](#) als ieder ander. En in Duitsland meldden wetenschappers trots dat het aantal besmettingen in Jena afvlakte nadat mondkapjes er verplicht waren gesteld. In vier andere regio's vonden onderzoekers [echter geen enkel effect](#) – en in één gebied trok de epidemie na verplichting van de mondkapjes juist meer aan. 'Mondkapjes zullen heus iets hebben gedaan. Maar het heeft de pandemie niet voorkomen', zegt Wertheim.

In Massachusetts is dat niet anders. Na de afname schoot het aantal besmettingen in de staat weer omhoog, en na de zomer kwam daar een enorme tweede golf overheen. Wertheim: 'Het mondkapje is niet de grote gamechanger geweest. Dat is het vaccin.'

2| Als virusstopper

Het gebeurde in Springfield, in de Amerikaanse staat Missouri, en is gaan gelden als een van de wonderverhalen van de mondkapjeskunde. Twee kappers, mét mondkapje, hielpen er in totaal 139 klanten, terwijl ze zich al niet zo lekker voelden. Corona, zo bleek. Thuis infecteerden de kappers meerdere gezinsleden. Maar op het werk: [geen klant was besmet geraakt](#).

Dat kan toeval zijn, benadrukt hoogleraar moleculaire epidemiologie Bonten. 'Studies die het effect van mondkapjes zo mooi aantonen, krijgen nu eenmaal meer aandacht dan studies die dat niet doen.' Maar veelzeggend is het wel: 'Het laat in elk geval zien dat dit soort dingen kunnen gebeuren.'

Op landelijk niveau mag het mondkapjeseffect dan nogal ongrijpbaar zijn, in afzonderlijke gevallen kunnen ze wel degelijk nut hebben, constateert ook een Duits-Chinees onderzoeksteam

in [een recente analyse in vakblad Science](#). Het punt is dat het coronavirus zich op zeer verschillende manieren kan manifesteren, alleen al omdat de een veel meer virusdeeltjes aanmaakt dan de ander, en het virus zich op de ene plek gretiger verspreidt dan op de andere. Af en toe leidt dat tot de 'perfecte storm', waarbij het mondkapje net het verschil kan betekenen tussen wel of niet besmet raken, aldus de groep. Neem die keer dat een Zuid-Koreaanse vrouw een superverspreiding veroorzaakte in de Starbucks: de halve koffietent raakte besmet, [behalve de medewerkers die een mondkapje droegen](#).



Beeld Rebecca Fertinel

De pest is alleen: leg er maar eens de vinger op. 'Ik werk veel met Duitse collega's', geeft arts-microbioloog Kluytmans als voorbeeld. 'Die dragen trouw maskers. Maar ze doen ook allerlei andere dingen veel trouwer. Ze zitten bijvoorbeeld altijd ruim op afstand.'

'Het is onmogelijk om de bijdrage van het mondkapje alleen vast te stellen, los van de rest', vreest ook Bonten. 'Je komt telkens uit op losse waarnemingen, of onderzoeken waar verbanden gezien worden. En ik denk ook niet dat je veel verder kunt komen dan dat.'

Nog een mogelijke zegening van het mondkapje: dat het de ernst van de ziekte dempt. Bij [een geïnspireerd experiment](#) spanden wetenschappers van de Universiteit van Hongkong doeken over kooien van goudhamsters, alsof ze een reuzenmondkapje op hadden, en bliezen coronavirus de kooien in. De dieren mét 'mondkapje' op werden minder ziek.

Wie minder virus binnenkrijgt, zou dus weleens [minder ziek kunnen worden](#). Alleen: dat zijn hamsters, zegt viroloog Bart

Haagmans (Erasmus MC). ‘Er kan een kern van waarheid in zitten dat er zoiets bestaat als een dosis-effectrelatie. Maar we zullen dat toch eerst moeten bevestigen bij de mens.’

3| Als signaalvlag

Vreemd blijft het. Hoewel ze hinderlijk zijn en medici vraagtekens hebben bij hun nut, blijkt in ons land [liefst 83 procent mondkapjes in de publieke ruimte te steunen](#), volgens onderzoek van de RIVM Gedragsunit. Volgens een peiling van het *EenVandaag*-opiniepanel is een kwart tot een derde van de ondervraagden zelfs voornemens [het kapje straks gewoon te blijven dragen](#). Vaccins en afschaffing van de draagplicht of niet.

Rond het mondkapje speelt dan ook veel meer dan kille medische afwegingen alleen, [weten sociaal-wetenschappers](#). Voor de een is zo'n kapje de reddingsboei waaraan men zich vastklampt of een symbool waarmee men betrokkenheid en onderlinge verbondenheid uitstraalt; voor de ander juist een verfoeilijke ‘muilkorf’ die bemoeizucht van de staat symboliseert.



Beeld Rebecca Fertinel

Zou dat doorwerken in hoe mensen met een mondkapje op zich gedragen? Nemen mensen met een mondkapje op bijvoorbeeld meer risico's, vanwege een vals gevoel van veiligheid, of 'schijnveiligheid', zoals dat kwam te heten?

Inmiddels is het antwoord wel zo ongeveer duidelijk: nee. Op veiligheidscamera's in Amsterdam en Rotterdam zagen

wetenschappers onder leiding van Marie Rosenkrantz Lindegaard van het Nederlands Studiecentrum Criminaliteit en Rechtshandhaving dat mensen [niet opeens dichterbij elkaar gingen lopen](#) na invoering van de (toen tijdelijke) mondkapjesplicht op straat. Niet mondkapjes, maar hoe druk het is, bepaalt de onderlinge afstand, ontdekten ze.

Als het mondkapje al iets doet, is dat het mensen juist wat voorzichtiger maakt – meer bewust van het virus. Zo gaan personen met een mondkapje op méér de handen wassen, en in Duitsland zagen onderzoekers hoe mensen in de wachtrij wat extra afstand hielden tot dragers van een mondkapje. Het argument dat veiligheidsmaatregelen tot meer onvoorzichtigheid zou leiden, is dan ook een klassiek staaltje psychologie van de koude grond, aldus [een Britse analyse in vakblad The BMJ](#). Bewust in het leven geroepen door de auto-industrie, die het graag als argument aanvoert tegen allerlei dure veiligheidseisen: als we de kooiconstructie steviger maken, krijg je alleen maar meer ongelukken.

Goed nieuws, vindt Bonten. 'Als het effect van deze maatregel is geweest dat mensen zeggen: ik blijf een beetje uit je buurt, dan is dat mooi meegenomen. Misschien is dat wel de belangrijkste werking van niet-medische mondkapjes.'



Beeld Rebecca Fertinel

Intussen is de stemming danig omgeslagen. Zo gretig als we ze destijds omarmden, zo graag wil een meerderheid nu weer van de kapjes af. Want al blijft een minderheid ze gewoon dragen, de meeste mensen vinden het allang best dat de kapjes af mogen, blijkt ook uit de *EenVandaag*-peiling. 'Je merkt het om je heen', zegt Kluytmans. 'Veel mensen balen ervan.'

Misschien zal het mondkapje ons nog het meeste bijblijven als loden last – voor het milieu, welteverstaan. Zo klagen biologen en dierenambulances over de vogels en andere dieren die verstrikt zijn geraakt in een mondkapje, en slaan zee- en kustbeschermers alarm om de vele maskers die inmiddels [als kwallen in zee dobberen](#).

Naar schatting een verpletterende 3 miljoen maskertjes per minuut, draaien we er wereldwijd doorheen, waarvan de meeste wegwerpmaskers vol plastic vezels. En dat is een heel nieuw milieuprobleem, aldus [een pas verschenen overzichtsstudie](#).

Lees ook



1 jaar corona in Nederland: hoofdrolspelers gaan in een brief aan zichzelf terug in de tijd met de kennis van nu



Waarom men in Amerika opeens twee mondkapjes over elkaar draagt



Een jaaroverzicht in mondkapjes: van Eilish tot Gaga, van Merkel tot E.T.



MEER OVER GEZONDHEID ZIEKTEN OMT DUITSLAND EENVANDAAG
MASSACHUSETTS AMPHIA ZIEKENHUIS AMSTERDAM MAARTEN KEULEMANS

Nieuws & Achtergrond

NIEUWS

MEER >



Feyenoord-directeur Koevermans: 'Nieuw stadion mag niet meer dan 441 miljoen euro kosten'



PRODUKTIE 8

Correlation Between Mask Compliance and COVID-19 Outcomes in Europe

Beny Spira¹

1. Microbiology, Universidade de São Paulo, São Paulo, BRA

Corresponding author: Beny Spira, benys@usp.br

Review began 04/10/2022

Review ended 04/18/2022

Published 04/19/2022

© Copyright 2022

Spira. This is an open access article distributed under the terms of the Creative Commons Attribution License CC-BY 4.0., which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Abstract

Masking was the single most common non-pharmaceutical intervention in the course of the coronavirus disease 2019 (COVID-19) pandemic. Most countries have implemented recommendations or mandates regarding the use of masks in public spaces. The aim of this short study was to analyse the correlation between mask usage against morbidity and mortality rates in the 2020-2021 winter in Europe. Data from 35 European countries on morbidity, mortality, and mask usage during a six-month period were analysed and crossed. Mask usage was more homogeneous in Eastern Europe than in Western European countries. Spearman's correlation coefficients between mask usage and COVID-19 outcomes were either null or positive, depending on the subgroup of countries and type of outcome (cases or deaths). Positive correlations were stronger in Western than in Eastern European countries. These findings indicate that countries with high levels of mask compliance did not perform better than those with low mask usage.

Categories: Infectious Disease, Environmental Health, Epidemiology/Public Health

Keywords: mortality index, europe, linear correlation, masks, covid-19 transmission

Introduction

Universal masking has been introduced during the coronavirus disease 2019 (COVID-19) pandemic at an unprecedented global scale as an important tool to curb viral transmission among potential susceptible persons. Face masks still are one of the most significant and controversial symbols in the fight against COVID-19. Two large randomised controlled trials about mask effectiveness performed during the pandemic came out with mixed results [1,2]. Several studies that analysed the effect of masks on the general population (ecological studies) have concluded that masks were associated with a reduction in transmission and cases [3-7]. However, these studies were restricted to the summer and early autumn of 2020. From March 2020 onwards, country after country instituted some form of mask mandate or recommendation. The stringency of these measures varied among the different countries and they, therefore, resulted in different proportions of mask compliance, ranging from 5% to 95% [8]. Such heterogeneity in mask usage among neighbouring countries provided an ideal opportunity to test the effect of this non-pharmaceutical intervention on the progression of a strong COVID-19 outbreak.

Materials And Methods

Study design

This analysis aimed to verify whether mask usage was correlated with COVID-19 morbidity and mortality. Daily data on COVID-19 cases and deaths and on mask usage were obtained for all European countries. The rationale behind the choice of European countries for comparison was fourfold: (1) availability and reliability of data; (2) a relative population homogeneity and shared history of epidemics (comparing countries from different continents may bring too many confounding factors); (3) similar age stratification and access to health assistance; and (4) divergent masking policies and different percentages of mask usage among the different populations, despite the fact that the entire continent was undergoing an outbreak of COVID-19 at the time period analysed in this study.

Inclusion criterion

Data were collected from the following Eastern and Western European countries: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czechia, Hungary, North Macedonia, Poland, Romania, Serbia, Slovakia, Slovenia, Belarus, Estonia, Latvia, Lithuania, Republic of Moldova, Ukraine, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, and Northern Ireland. The inclusion criterion was a population size higher than one million people.

Data retrieval

Data on morbidity, mortality, and mask usage were retrieved from the Institute for Health Metrics and Evaluation (IHME) at the University of Washington [8]. Data from IHME were downloaded on 14th February

How to cite this article

Spira B (April 19, 2022) Correlation Between Mask Compliance and COVID-19 Outcomes in Europe. Cureus 14(4): e24268. DOI 10.7759/cureus.24268

2022. IHME mask data sources are the Delphi Group at Carnegie Mellon University and the University of Maryland COVID-19 Trends and Impact Surveys, in partnership with Facebook, Kaiser Family Foundation, and YouGov COVID-19 Behaviour Tracker Survey (<https://www.healthdata.org>). Data on vaccination were obtained from Our World in Data (OWID) [9] on 4th April 2022.

Statistical analysis

Data from 35 European countries on morbidity, mortality, and mask usage during a six-month period were collected and analysed. Spearman's correlation analyses and Shapiro-Wilk normality checks were in JASP (version 0.15; University of Amsterdam, Amsterdam, Netherlands) [10] and linear regressions in Wolfram Mathematica 13.0 (Wolfram Research, Inc., Champaign, Illinois) [11].

Results

This brief communication reports the correlation between the proportion of mask usage in the population and the number of cases (per million) and deaths (per million) from October 2020 to March 2021 in 35 European countries (Table 1). For this analysis, all European countries, including West and East Europe, with more than one million inhabitants were selected, encompassing a total of 602 million people. All analysed countries underwent a peak of COVID-19 infection during these six months (Figures 1, 2). The average proportion of mask usage in the referred period was $60.9\% \pm 19.9\%$, slightly higher in Eastern than in Western Europe (62.1% and 59.6%, respectively). However, the level of mask compliance was considerably more homogeneous in East (SD = 13.4%) than in West European countries (SD = 25.4%).

Country	Average mask usage ¹	Cases/million	Deaths/million
Albania	53%	40990	679
Bosnia and Herzegovina	40%	43078	1738
Bulgaria	55%	46405	1784
Croatia	29%	60039	1334
Czechia	52%	137494	2418
Hungary	77%	64704	2064
North Macedonia	67%	52048	1413
Poland	72%	57966	1315
Romania	81%	42898	1121
Serbia	54%	64829	521
Slovakia	76%	128326	1779
Slovenia	69%	101198	1879
Belarus	55%	25595	149
Estonia	64%	78525	639
Latvia	64%	52493	972
Lithuania	74%	75664	1252
Republic of Moldova	66%	48045	1102
Ukraine	67%	34298	686
Austria	55%	56237	959
Belgium	71%	66905	1135
Denmark	14%	34942	312
Finland	46%	12252	100
France	76%	58354	928
Germany	57%	29671	791
Greece	84%	23722	745

Ireland	71%	40270	587
Italy	91%	54310	1223
Netherlands	51%	68009	596
Norway	29%	15340	75
Portugal	84%	70056	1397
Spain	95%	55480	968
Sweden	5%	70356	759
Switzerland	53%	62669	927
United Kingdom	62%	57689	1363
Northern Ireland	68%	54567	1039
Shapiro-Wilk p-value ²	0.056	0.004	0.693

TABLE 1: Proportion of mask usage and the number of COVID-19 cases and deaths per million throughout the 2020-2021 late fall and winter (1st October to 31st March) in Europe.

¹ Percent of the population reporting always wearing a mask when leaving home.

² Shapiro-Wilk test for normality.

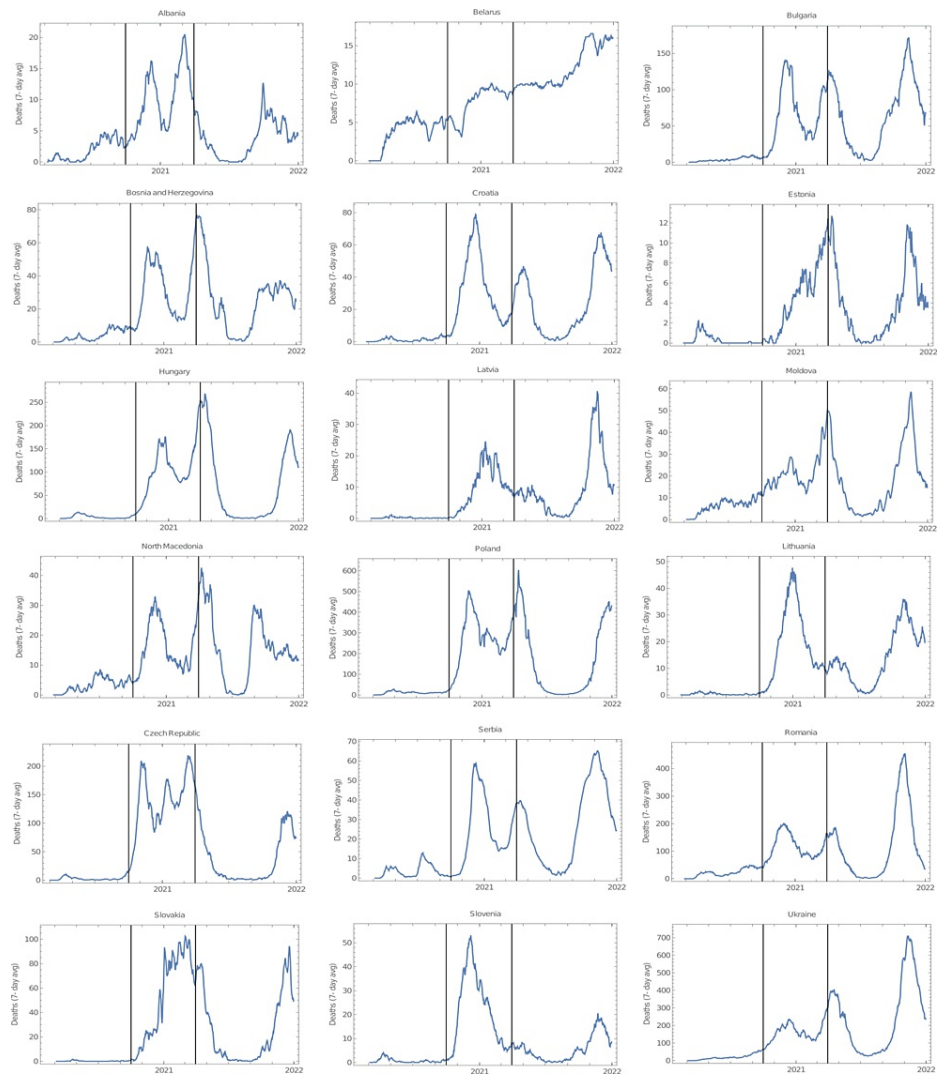


FIGURE 1: Mortality from COVID-19 throughout the pandemic in East European countries.

The area between vertical black bars corresponds to the period analysed in this study (1 October 2020 to 31 March 2021). Data were downloaded on 14 February 2022 from Institute for Health Metrics and Evaluation (IHME).

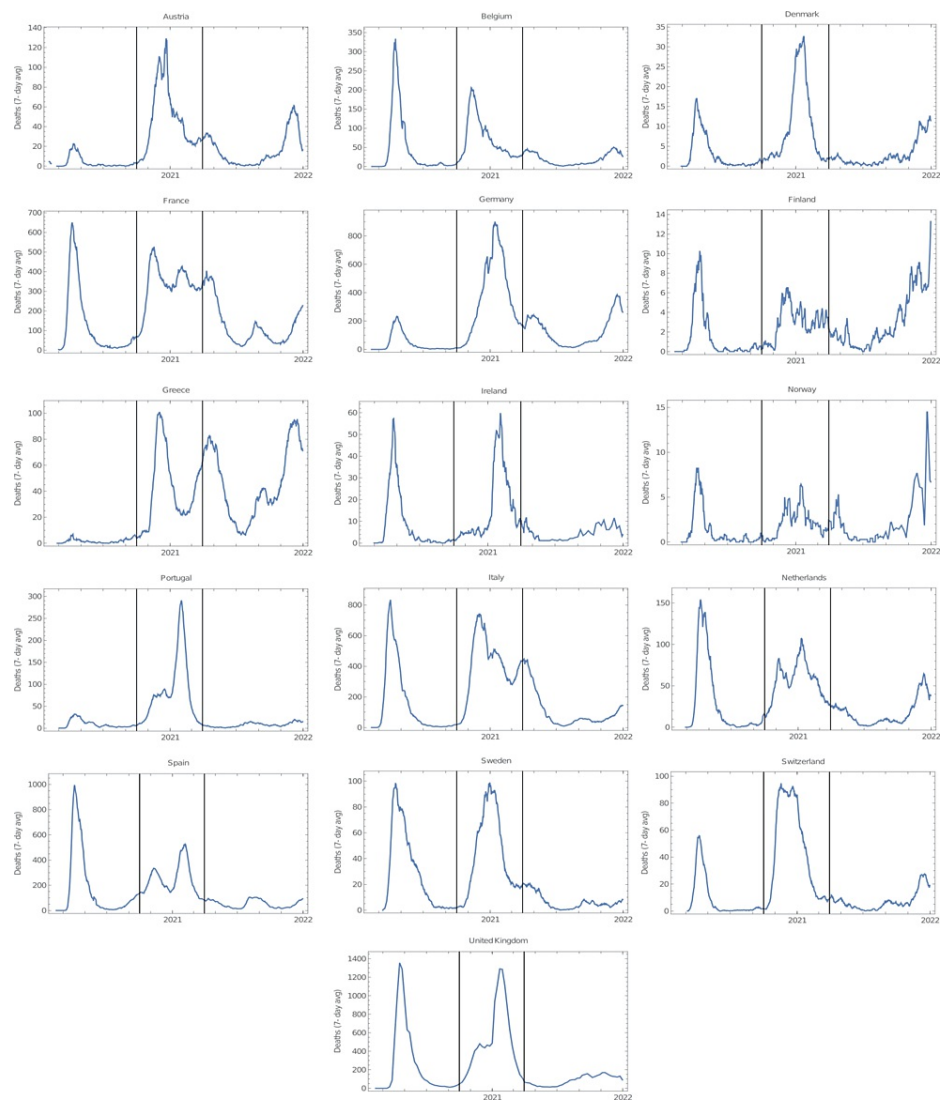


FIGURE 2: Mortality from COVID-19 throughout the pandemic in West European countries.

The area between vertical black bars corresponds to the period analysed in this study (1 October 2020 to 31 March 2021). Data were downloaded on 14 February 2022 from Institute for Health Metrics and Evaluation (IHME).

Surprisingly, weak positive correlations were observed when mask compliance was plotted against morbidity (cases/million) or mortality (deaths/million) in each country (Figure 3). Neither the number of cases nor the proportion of mask usage followed a Gaussian distribution (Shapiro-Wilk p -values were 0.004 and 0.0536, respectively). A Spearman's rank test was applied to quantify the correlation between mask usage, cases, and deaths (Table 2). The positive correlation between mask usage and cases was not statistically significant ($\rho = 0.136$, $p = 0.436$), while the correlation between mask usage and deaths was positive and significant ($\rho = 0.351$, $p = 0.039$). The Spearman's correlation between masks and deaths was considerably higher in the West than in East European countries: 0.627 ($p = 0.007$) and 0.164 ($p = 0.514$), respectively. This difference could be associated with the fact that the most populous countries are located in West Europe. However, the correlations did not significantly change when the seven countries with populations > 20 million were excluded from the analysis (cases $\rho = 0.129$ ($p = 0.513$); deaths $\rho = 0.375$ ($p = 0.049$)). Analyses of other sub-groups, such as countries with populations smaller or higher than six million, higher than 10 million, or higher than 15 million, were also evaluated. None of these tests provided negative correlations between mask usage and cases/deaths.

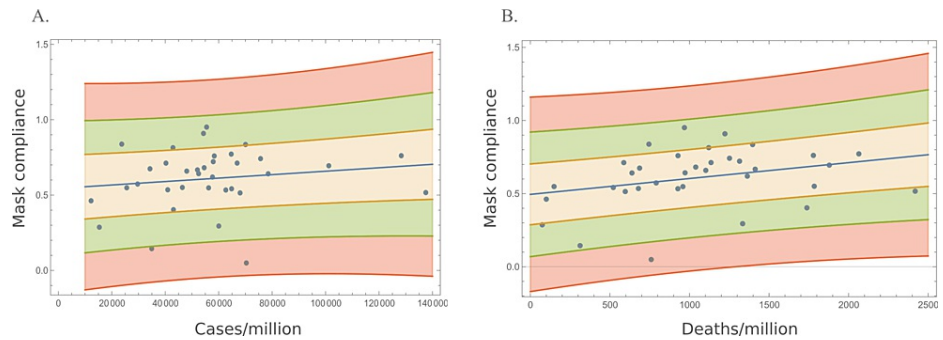


FIGURE 3: Correlation between average mask compliance and cases/million (A) or deaths/million (B) in 35 European countries.

Each dot represents a country. The blue line represents the fitted regression line and the areas above and below indicate 1 σ (yellow), 2 σ (green), or 3 σ (red).

Territory	Masks x cases	Masks x deaths
All Europe	0.136 (0.436)	0.351 (0.039)*
Eastern Europe ¹	0.130 (0.606)	0.164 (0.514)
Western Europe ²	0.05 (0.848)	0.627 (0.007)*

TABLE 2: Spearman's rank correlation coefficient rho (p-value) between mask usage and COVID-19 cases or deaths.

¹ Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czechia, Hungary, North Macedonia, Poland, Romania, Serbia, Slovakia, Slovenia, Belarus, Estonia, Latvia, Lithuania, Republic of Moldova, and Ukraine.

² Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, and Northern Ireland.

* Statistically significant.

Discussion

Mask mandates were implemented in almost all world countries and in most places where masks were not obligatory, their use in public spaces was recommended [12]. Accordingly, the World Health Organization (WHO) as well as other public institutions, such as the IHME, from which the data on mask compliance used in this study were obtained, strongly recommend the use of masks as a tool to curb COVID-19 transmission [8,13]. These mandates and recommendations took place despite the fact that most randomised controlled trials carried out before and during the COVID-19 pandemic concluded that the role of masks in preventing respiratory viral transmission was small, null, or inconclusive [1,2,14,15]. Conversely, ecological studies, performed during the first months of the pandemic, comparing countries, states, and provinces before and after the implementation of mask mandates almost unanimously concluded that masks reduced COVID-19 propagation [3-7,16]. However, mask mandates were normally implemented after the peak of COVID-19 cases in the first wave, which might have given the impression that the drop in the number of cases was caused by the increment in mask usage. For instance, the peak of cases in Germany's first wave occurred in the first week of April 2020, while masks became mandatory in all of Germany's federal states between the 20th and 29th of April [5], at a time when the propagation of COVID-19 was already declining. Furthermore, the mask mandate was still in place in the subsequent autumn-winter wave of 2020-2021, but it did not help preventing the outburst of cases and deaths in Germany that was several-fold more severe than in the first wave (Figure 2).

The findings presented in this short communication suggest that countries with high levels of mask compliance did not perform better than those with low mask usage in the six-month period that encompassed the second European wave of COVID-19. It could be argued that some confounding factors could have influenced these results. One of these factors could have been different vaccination rates among the studied countries. However, this is unlikely given the fact that at the end of the period analysed in this

study (31st March 2021), vaccination rollout was still at its beginning, with only three countries displaying vaccination rates higher than 20%: the UK (48%), Serbia (35%), and Hungary (30%), with all doses counted individually [9]. It could also be claimed that the rise in infection levels prompted mask usage resulting in higher levels of masking in countries with already higher transmission rates. While this assertion is certainly true for some countries, several others with high infection rates, such as France, Germany, Italy, Portugal, and Spain had strict mask mandates in place since the first semester of 2020. In addition, during the six-month period covered by this study, all countries underwent a peak in COVID-19 infections (Figures 1, 2), thus all of them endured similar pressures that might have potentially influenced the level of mask usage.

Conclusions

While no cause-effect conclusions could be inferred from this observational analysis, the lack of negative correlations between mask usage and COVID-19 cases and deaths suggest that the widespread use of masks at a time when an effective intervention was most needed, i.e., during the strong 2020-2021 autumn-winter peak, was not able to reduce COVID-19 transmission. Moreover, the moderate positive correlation between mask usage and deaths in Western Europe also suggests that the universal use of masks may have had harmful unintended consequences.

Additional Information

Disclosures

Human subjects: All authors have confirmed that this study did not involve human participants or tissue.

Animal subjects: All authors have confirmed that this study did not involve animal subjects or tissue.

Conflicts of interest: In compliance with the ICMJE uniform disclosure form, all authors declare the following: **Payment/services info:** All authors have declared that no financial support was received from any organization for the submitted work. **Financial relationships:** All authors have declared that they have no financial relationships at present or within the previous three years with any organizations that might have an interest in the submitted work. **Other relationships:** All authors have declared that there are no other relationships or activities that could appear to have influenced the submitted work.

Acknowledgements

I am grateful to Francisco G. Nóbrega, Guilherme Toto Settanni, and Hyun Mo Yang for providing thoughtful suggestions and to Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP). B.S. is a Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq) research fellow.

References

1. Abaluck J, Kwong LH, Styczynski A, et al.: Impact of community masking on COVID-19: a cluster-randomized trial in Bangladesh. *Science*. 2022, 375:eabi9069. [10.1126/science.abi9069](https://doi.org/10.1126/science.abi9069)
2. Bundgaard H, Bundgaard JS, Raaschou-Pedersen DE, et al.: Effectiveness of adding a mask recommendation to other public health measures to prevent SARS-CoV-2 infection in Danish mask wearers: a randomized controlled trial. *Ann Intern Med*. 2021, 174:335-43. [10.7326/M20-6817](https://doi.org/10.7326/M20-6817)
3. Adjodah D, Dinakar K, Chinazzi M, et al.: Association between COVID-19 outcomes and mask mandates, adherence, and attitudes. *PLoS One*. 2021, 16:e0252315. [10.1371/journal.pone.0252315](https://doi.org/10.1371/journal.pone.0252315)
4. Lyu W, Wehby GL: Community use of face masks and COVID-19: evidence from a natural experiment of state mandates in the US. *Health Aff (Millwood)*. 2020, 39:1419-25. [10.1377/hlthaff.2020.00818](https://doi.org/10.1377/hlthaff.2020.00818)
5. Mitze T, Kosfeld R, Rode J, Wälde K: Face masks considerably reduce COVID-19 cases in Germany. *Proc Natl Acad Sci U S A*. 2020, 117:32293-301. [10.1073/pnas.2015954117](https://doi.org/10.1073/pnas.2015954117)
6. Rader B, White LF, Burns MR, et al.: Mask-wearing and control of SARS-CoV-2 transmission in the USA: a cross-sectional study. *Lancet Digit Health*. 2021, 3:e148-57. [10.1016/S2589-7500\(20\)30293-4](https://doi.org/10.1016/S2589-7500(20)30293-4)
7. Van Dyke ME, Rogers TM, Pevzner E, et al.: Trends in county-level COVID-19 incidence in counties with and without a mask mandate — Kansas, June 1-August 23, 2020. *MMWR Morb Mortal Wkly Rep*. 2020, 69:1777-81. [10.15585/mmwr.mm6947e2](https://doi.org/10.15585/mmwr.mm6947e2)
8. Institute for Health Metrics and Evaluation. COVID-19 estimate downloads. (2020). Accessed: February 14, 2022: <https://www.healthdata.org/covid/data-downloads>.
9. Our World in Data. Coronavirus pandemic (COVID-19). (2022). Accessed: April 4, 2022: <https://ourworldindata.org/coronavirus>.
10. JASP. JASP (version 0.16.1). (2022). <https://jasp-stats.org/>.
11. Wolfram Research Inc. Mathematica, version 13.0.0. (2022). <https://www.wolfram.com/mathematica>.
12. What countries require or recommend masks in public?. (2020). Accessed: April 9, 2022: <https://masks4all.co/what-countries-require-masks-in-public/>.
13. World Health Organization. When and how to use masks. (2022). Accessed: April 9, 2022: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public/when-and-how-to-use-masks>.
14. Xiao J, Shiu EY, Gao H, Wong JY, Fong MW, Ryu S, Cowling BJ: Nonpharmaceutical measures for pandemic influenza in nonhealthcare settings—personal protective and environmental measures. *Emerg Infect Dis*. 2020, 26:967-75. [10.3201/eid2605.190994](https://doi.org/10.3201/eid2605.190994)
15. Jefferson T, Del Mar CB, Dooley L, et al.: Physical interventions to interrupt or reduce the spread of respiratory viruses. *Cochrane Database Syst Rev*. 2020, 11:CD006207. [10.1002/14651858.CD006207.pub5](https://doi.org/10.1002/14651858.CD006207.pub5)
16. Ford N, Holmer HK, Chou R, Villeneuve PJ, Baller A, Van Kerkhove M, Allegranzi B: Mask use in community

settings in the context of COVID-19: a systematic review of ecological data. *EClinicalMedicine*. 2021, 38:101024. [10.1016/j.eclinm.2021.101024](https://doi.org/10.1016/j.eclinm.2021.101024)

PRODUKTIE 9

"De bescherming door een mondkapje is nul, fake"

Directeur Volksgezondheid Suriname: "Wij werken met gerenommeerde gezondheidsinstellingen zoals de PAHO en WHO"

Da wetenschappers het wereldwijd niet altijd met elkaar eens zijn over de uiteenlopende Covid-maatregelen die door gezondheidsautoriteiten worden ingesteld in de strijd tegen het virus en elkaar ook tegenspreken, is zo langzamerhand een bekend gegeven. Een voorbeeld is de vraag of een avondklok wel of geen effect heeft op het aantal Covid-besmettingen. Veel wetenschappers zijn niet in staat om enig effect aan te kunnen tonen. Maar, wetenschappers en artsen verschillen ook van mening over de effectiviteit en de zin van het dragen van een mond-/neuskapje. Er zouden mondkapjes op de markt zijn die juist schadelijk zijn voor de gezondheid, omdat ze bepaalde giftige stoffen bevatten.

Al die uit elkaar liggende meningen van wetenschappers en artsen maken het voor de doorsnee burger heel lastig om zelf te kunnen bepalen hoe hij of zij zich het beste kan beschermen tegen het coronavirus. Een virus dat de afgelopen dagen in een aantal landen ook behandeld wordt

als een gewoon griepvirus. Wie of wat moet de burger nog geloven?

"Het is de grootste onzin in de wetenschap"

De Nederlandse dr. ir. immunoloog Carla Peeters is bijvoorbeeld een fel tegenstander van het gebruik van mondkapjes. De medische en niet-medische varianten, het maakt haar niet uit. "Daarin zit geen enkel verschil. De bescherming is nul, fake. Het slaat nergens op en is de grootste onzin in de wetenschap." Peeters kan er niet over uit: "Ik ben het echt helemaal zat", doelende op de veelbesproken coronamaatregel.

Volgens de immunoloog, die jarenlang op de afdeling infectieziekten van het RIVM (Rijksinstituut voor Volksgezondheid en Milieu) heeft gewerkt, is de kans op besmetting in de buitenlucht nihil. Bovendien is volgens haar niet duidelijk wat de langetermijneffecten van het langdurig dragen van mondkapjes zijn, zo bericht het tv-programma Hart van Nederland op 22 januari. Peeters is al sinds het begin van de coronacrisis kritisch op

het beleid. Ze vergelijkt het coronavirus met een griepvirus. Ook noemt ze de schadelijke stoffen die in de meeste mondkapjes zitten. Deze brengen volgens de immunologe schade toe aan mens en milieu. In de meeste uit China afkomstige maskers zitten "toxische stoffen, kankerverwekkende stoffen en zware metalen". De stoffen die door mondkapjes in het milieu belanden hebben 450 jaar nodig op te worden afgebroken. Ook kaart ze de vruchtbaarheidscrisis aan, de stofjes in de mondkapjes zouden namelijk invloed hebben op de vruchtbaarheid.

"Meerdere wetenschappelijke studies en andere analyses hebben herhaaldelijk aangetoond dat het dragen van mondkapjes de verspreiding van het virus niet vermindert." Volgens haar is "de belangrijkste preventie voor Covid-19 bij klachten thuisblijven en het versterken van het immuunsysteem".

"Klachten bij dragers van chirurgische maskers"

De kno-arts Judith Vermeiren van ziekenhuis AZ Maria Middelaars in Gent, België, zei een jaar geleden vooral klachten te zien bij dragers van de zwaardere professionele FFP2-maskers. "Daarbij is het



moeilijker om genoeg zuurstof te krijgen en kunnen de uitgedemde CO2-gassen moeilijk weg. Wie die mondkapjes draagt, kan minder zuurstof opnemen en bouwt meer CO2 in het bloed op. Dat leidt tot hoofdpijn en vermoeidheidsklachten. Je kunt in het dagelijks leven beter lichtere maskers dragen. Het zwaardere FFP2-masker is gewoon ongezond."

* FFP1- en FFP2-maskers zijn chirurgische mondneusmaskers (Filtering Facepiece Particle; ofwel: een gezichtsmasker dat deeltjes filtert). * Maar, zelfs dan ademen we achter het mondkapje meer door de mond dan door de neus, zegt Vermeiren. "Bij lichtere maskers is dat vooral een psychologische kwestie.

We hebben vaak het gevoel extra lucht nodig te hebben. Door dat mondademhalingsgedrag drogen de slijmvliezen sneller uit, waardoor we een droge keel en keelpijn krijgen. Het valt ook op dat we in de loop van de dag minder water drinken, omdat we dat masker dragen. En ook dat veroorzaakt keelpijn. Doordat we onze keel minder bevochtigen, krijgen mensen met een gevoelige stem ook last van heesheid. Ik raad dan aan om te dampen met kamille en eucalyptus om de stem te bevochtigen." En er is nog meer aan de hand met onze stem: "Maskerdragers hebben ook de neiging om luider te praten en de stem te forceren", zegt de kno-arts. "Alweer zijn keelpijn en heesheid in vele gevallen het gevolg, zeker bij

mensen met een gevoelige stem."

Suriname

De directeur van het ministerie van Volksgezondheid in Suriname, Rakesh Gajadhar Sukul, zegt maandag 24 januari in een reactie tegen Dagblad Suriname: "Ik zou alleen willen melden dat we werken met gerenommeerde gezondheidsinstellingen zoals de PAHO en WHO. Alle informatie hebben ze op hun website." Kennelijk is het issue van mogelijke schadelijke effecten van het dragen van een mondkapje niet echt een issue voor Volksgezondheid en zijn risico's en klachten in Suriname niet bekend....

COLOFON

Dagblad Suriname - gesticht op 6 juni 2002
 Uitgever: FaFam Publishing N.V.
 Wnd. Alg. Coördinator: James K. Lalmahomed
 en Mevrouw Mr Ch. Aljoé
 Kantoor: Zwartenhovensbrugstraat 154
 P.O. Box: 975, Paramaribo - Suriname
 Telefoon: 426336, Telefax: 471788
 E-mail Redactie: general@dburiname.com
 E-mail Administratie: ps@surinam@yahoo.com
 Website: www.dburiname.com

PRODUKTIE 10

**WET van,
houdende nadere wijziging van de Wet
Uitvoering Burgerlijke Uitzonderingstoestand
(S.B. 2020 no. 151, zoals gewijzigd bij
S.B. 2021 no. 20)**

ONTWERP

DE PRESIDENT VAN DE REPUBLIEK SURINAME,

In overweging genomen hebbende, dat het noodzakelijk is de Wet Uitvoering Burgerlijke Uitzonderingstoestand (S.B. 2020 no. 151, zoals gewijzigd bij S.B. 2021 no. 20), nader te wijzigen;

Heeft, de Staatsraad gehoord, na goedkeuring door De Nationale Assemblée, bekrachtigd de onderstaande wet:

ARTIKEL I

In de Wet Uitvoering Burgerlijke Uitzonderingstoestand (S.B. 2020 no. 151, zoals gewijzigd bij S.B. 2012 no. 20) worden de volgende wijzigingen aangebracht:

- A. In artikel 1 wordt na onderdeel f een nieuw onderdeel g toegevoegd, luidende als volgt:
 - g. besloten plaats: een niet openbare en een niet voor eenieder toegankelijke plaats, niet zijnde een woning.

- B. Na artikel 6 wordt een nieuw artikel 6a toegevoegd, luidende als volgt:

Bijzondere maatregelen bestrijding Covid-19 pandemie
Artikel 6a

1. Onverminderd het bepaalde in artikel 6 kan de Regering bij presidentieel besluit in verband met de bestrijding van de Covid-19 pandemie bijzondere maatregelen krachtens dit artikel nemen.

2. Bij presidentieel besluit worden de voor het publiek toegankelijke en besloten plaatsen als bedoeld in artikel 1 onder e en g aangewezen, daaronder begrepen de plaatsen waar arbeid wordt verricht of pleegt te worden verricht of ten aanzien waarvan redelijkerwijze kan worden vermoed dat aldaar arbeid wordt verricht, die slechts onder de in dat presidentieel besluit gestelde voorwaarden voor personen mogen worden opengesteld, toegankelijk zijn of om op die plaatsen aanwezig te zijn.

3. Tot de in lid 2 gestelde voorwaarden behoren in ieder geval dat voor de toegang tot de in dat lid bedoelde plaatsen of voor het aldaar aanwezig zijn, de personen bewijs moeten kunnen leveren van volledig gevaccineerd zijn tegen SARS-COV-2 of van een negatieve SARS-COV-2-RT PCR test of een in dat presidentieel besluit door de overheid erkend SARS-COV-2 antigeen-sneltest, die niet ouder dan 24 uur is. De in de

- eerste volzin genoemde verplichting tot overlegging van een bewijs van vaccinatie of van de daarin genoemde testen is niet van toepassing op:
- a. een persoon tot en met de leeftijd van twaalf jaar of
 - b. een persoon waarvan wegens medische gronden vaccinatie tegen SARS-COV-2 of het uitvoeren van genoemde testen ongewenst is of achterwege behoort te blijven, zulks blijkende uit een door een medische specialist afgegeven verklaring of
 - c. een persoon met religieuze gewetensbezwaren.
4. Ten aanzien van de toegang tot plaatsen waar arbeid wordt verricht of pleegt te worden verricht of ten aanzien waarvan redelijkerwijze kan worden vermoed dat aldaar arbeid wordt verricht, alsmede de toegang tot bepaalde andere dan in lid 2 genoemde plaatsen kan, ten aanzien van de vereiste van volledige vaccinatie en in afwijking daarvan, bij presidentieel besluit worden bepaald dat kan worden volstaan met een eerste vaccinatieprik, in de gevallen waarbij voor een volledige vaccinatie meer dan één keer dient te worden gevaccineerd. De toegang met de eerste vaccinatieprik is toegestaan tot de datum op de vaccinatiekaart waarop de tweede tevens laatste vaccinatieprik dient te zijn ontvangen.
 5. De werkgever of de eigenaar of het hoofd of de bestuurder en het opzichthoudend personeel of degene die verantwoordelijk is voor de in lid 2 bedoelde plaatsen of die bevoegd is tot het treffen van voorzieningen met betrekking tot de toegang daartoe, draagt zorg dat de personen aan wie toegang wordt verleend tot die plaatsen of om aldaar aanwezig te zijn, voldoen aan de krachtens de leden 2 en 3 gestelde voorwaarden.
 6. Het is degene die niet voldoet aan de bij of krachtens de leden 2 en 3 gestelde voorwaarden verboden, zich de toegang te verschaffen of aldaar aanwezig te zijn tot de daarin bedoelde plaatsen.
- C. In artikel 9 lid 1 en artikel 12 lid 1 wordt de zinsnede ‘krachtens artikel 6’ gewijzigd in: krachtens artikel 6 of artikel 6a.

ARTIKEL II

1. Deze wet wordt in het Staatsblad van de Republiek Suriname afgekondigd.
2. Zij treedt in werking met ingang van de dag volgende op die van haar afkondiging.
3. De Ministers van Justitie en Politie, van Arbeid, Werkgelegenheid en Jeugd en van Volksgezondheid zijn belast met de uitvoering van deze wet.

Gegeven te Paramaribo, de

CHANDRIKAPERSAD SANTOKHI

**WET van,
houdende nadere wijziging van de Wet
Uitvoering Burgerlijke Uitzonderingstoestand
(S.B. 2020 no. 151, zoals gewijzigd bij
S.B. 2021 no. 20)**

MEMORIE VAN TOELICHTING

(1). Algemeen

In december 2019 stak in de regio Wuhan in China een nieuw coronavirus de kop op, in aanvang als (novel-coronavirus) 2019-nCoV aangeduid en inmiddels formeel SARS-CoV-2 genaamd (severe acute respiratory syndrome coronavirus).

Op 30 januari 2020 had de Wereldgezondheidsorganisatie (WHO) de uitbraak tot «*Public Health Emergency of International Concern*» uitgeroepen. De WHO heeft de uitbraak van het virus op 11 maart 2020 tot pandemie verklaard en de lidstaten opgeroepen om alles te doen wat nodig is in hun nationale context om de verspreiding van het virus tegen te gaan, door in overleg met experts te bepalen welke maatregelen daartoe in de nationale situatie genomen moeten worden.

In maart 2020 is officieel het eerste geval van besmetting met het SARS-COV-2 virus in Suriname gemeld. Sedertdien zijn door de Regering in de verschillende sectoren, in het bijzonder de gezondheidssector, diverse ingrijpende maatregelen getroffen om de verspreiding van het virus en de gevolgen ervan zoveel als mogelijk te minimaliseren.

De grondslag van de maatregelen, is terug te voeren tot de Wet Uitvoering Burgerlijke Uitzonderingstoestand en deze maatregelen behelzen alle sectoren van de samenleving en zijn gericht op de beteugeling van de verspreiding van het virus, waarbij de vrijheid van de burgers in verband met die maatregelen eveneens seldom ongemoeid is gelaten.

Na langer dan een jaar is de volledige beteugeling van dit virus nog ver te zoeken en zijn de gevolgen in bijna alle sectoren van de samenleving, in het bijzonder de gezondheidssector, desastreus, getuige de vele duizenden besmettingen en honderden doden. De financieel-economische gevolgen voor het land zijn bekend; de economie is nimmer zo diep geraakt als door deze pandemie.

Tot een van de middelen in de strijd tegen het SARS-COV-2 virus is de ontwikkeling van vaccins tegen dit virus. Wereldwijd zijn verscheidene vaccins ontwikkeld die tot op zekere hoogte bescherming bieden tegen de gevolgen van het virus.

Variëren van tussen de 60% en 90% kunnen de ontwikkelde vaccins bescherming bieden tegen de ernstige gevolgen van het virus (zie rapporten... ???).

In Suriname is tot op het moment van de voorbereiding van de ontwerpwet een viertal vaccins (Pfizer, Astra-Seneca, Sinopharm en Moderna) voor de samenleving kosteloos beschikbaar. De overheid die grondwettelijk, maar ook op grond van haar internationale verplichtingen ervoor moet zorgdragen dat de lichamelijke en geestelijke gezondheid van de bevolking zo goed mogelijk moet zijn gewaarborgd, in het bijzonder door het treffen van maatregelen ter voorkoming, behandeling

en bestrijding van epidemieën, heeft dan ook ervoor gezorgd dat de vaccins tot een van de mogelijkheden voor de Surinaamse samenleving behoort om het virus te bestrijden.

Over de effectiviteit en betrouwbaarheid van bedoelde vaccins in de strijd tegen het SARS-COV-2 virus kan gemakshalve worden verwezen naar de autorisatie/goedkeuring die deze vaccins hebben gehad van de Wereldgezondheidsorganisatie (WHO) om te worden toegepast. De WHO gaat ervan uit dat van de geautoriseerde/goedgekeurde SARS-COV-2 vaccins, is aangetoond dat zij veilig en effectief zijn bij het voorkomen van ernstige ziekten en overlijden als gevolg van de infecties door het virus. Wereldwijd wordt, ten aanzien van de bestrijding van COVID-19 dan ook het accent gelegd op een zo hoog mogelijke vaccinatiegraad bereiken (minimaal 70%) voor de samenleving en daarmee een betere bescherming van de bevolking als geheel tegen de gevolgen van het virus.

Benadrukt dient te worden dat de bescherming begint bij het individuele lid van de samenleving dat is gevaccineerd, dat daardoor niet ziek of minder ernstig ziek kan geraken, de kans op ziekenhuisopname en overlijden, alsmede de kans op besmetting van een ander behoorlijk reduceert. Tegelijkertijd is het taak en de verantwoordelijkheid van de overheid om ervoor te zorgen dat de samenleving gezond blijft en dus een goede gezondheidszorg steeds gewaarborgd moet zijn.

Op grond van de huidige mogelijkheden en vooruitzichten met betrekking tot de aanpak van het SARS-COV-2 virus, is vaccinatie tegen het virus van het overgrote deel van de bevolking het enige redmiddel om uit deze pandemie te geraken. Het voorgaande kan alleen worden gerealiseerd, indien er een grote mate van bereidwilligheid bestaat om zich te laten vaccineren, hetgeen thans niet het geval is ondanks de uitputting van alle mogelijke middelen en manieren daartoe.

De gevolgen zijn nog steeds merkbaar en nemen ergere vormen aan als alleen wordt gekeken naar het aantal dagelijkse besmettingen en doden en de onhoudbare druk op de totale gezondheidszorg. Het wetsontwerp heeft dan ook tot doel om die bereidwilligheid voor de vaccinatie tegen het SARS-COV-2 virus op te voeren en daarmee de verspreiding en de gevolgen ervan tot een minimum te kunnen beperken.

(2). Uitgangspunten WHO en ILO

World Health Organization (WHO)

Het uitgangspunt van de WHO is dat vaccins een van de meest effectieve instrumenten zijn om mensen tegen COVID-19²⁰²¹ te beschermen. Met COVID-19-vaccinatie in veel landen in opmars kunnen sommige landen overwegen of zij misschien COVID-19-vaccinatie verplicht moeten stellen om de vaccinatiegraad te verhogen en volksgezondheidsdoelen te bereiken.

De WHO constateert dat het niet ongebruikelijk is dat overheden en instituten sommige handelingen of bepaalde soorten van gedrag onderhevige stellen aan verplichte vaccinatie teneinde het welzijn van individuen of gemeenschappen te beschermen.

De WHO gaat ervan uit dat dit verplichte vaccinatiebeleid ethisch gerechtvaardigd kan zijn, aangezien het van cruciaal belang kan zijn voor de bescherming van de gezondheid en het welzijn van het publiek.

Aangezien verplichte vaccinatie kan indruisen tegen individuele burgerrechten, vrijheden en de zelfbeschikking, moet worden gestreefd naar een evenwicht tussen gemeenschappelijk welzijn en individuele vrijheden. De WHO benadrukt dat, indien vaccinatiebeleid indruist tegen een

¹ COVID-19 and mandatory vaccination: Ethical considerations and caveats Policy brief d.d. 13 April 2021

individuele vrijheid, dit op zichzelf niet betekent dat dit beleid ongerechtvaardigd is. De rechtvaardiging moet hierin zijn gelegen dat het beleid dient ter bevordering van een ander waardevol sociaal doel, zoals het beschermen van de openbare gezondheid.

“Verplichte vaccinatie” (*mandatory vaccination* of *vaccination mandate*) komt doorgaans neer op het opleggen van **directe of indirecte dreiging** met het opleggen van beperkingen in gevallen van niet-vaccinatie. Doorgaans staat het verplichte vaccinatiebeleid een beperkt aantal uitzonderingen toe die worden erkend door autoriteiten (bijv. medische contra-indicaties die vaccineren in de weg staan). Verplichte vaccinatie gaat doorgaans niet gepaard met het daadwerkelijk dwingen of dreiging met strafrechtelijke sancties bij niet-naleving.

Toch beperkt het beleid van "verplichte vaccinatie" de individuele keuze van de persoon door vaccinatie een voorwaarde te maken voor bijvoorbeeld schoolbezoek of om te werken of de werkplaats te bezoeken in bepaalde bedrijfstakken of omgevingen, zoals de gezondheidszorg, het onderwijs of het leger.

Zo een beleid is niet ongebruikelijk constateert de WHO, hoewel moet worden opgemerkt dat de Wereldgezondheidsorganisatie (WHO) aanbeveelt om aan informatiecampagnes te werken om de burgers te motiveren om zich te vaccineren en het zoveel mogelijk toegankelijk maken van vaccins voor de bevolking. Dit zal dan ook steeds de richting zijn die door de overheid wordt gevolgd om naast de “verplichte” vaccinatie de burgerij maximaal te informeren en motiveren om zich te laten vaccineren.

De volgende overwegingen en kanttekeningen moeten in acht worden genomen door overheden en instanties die willen overgaan tot het toestaan van het verplichten van de COVID-19-vaccinatie:

1. de noodzaak van de vaccinatie en de proportionaliteit (verhoging van het middel van de vaccinatie tot het te bereiken doel);
2. voldoende bewijs van vaccinatieveiligheid;
3. voldoende bewijs van werkzaamheid en de effectiviteit van het vaccin;
4. voldoende aanbod;
5. vertrouwen van de populatie;
6. ethische besluitvormingsprocessen, waarbij alle partijen worden gehoord.

International Labour Organization (ILO)

De ILO zelf geeft aan dat haar verdragen en aanbevelingen niet direct ingaan op de kwestie van verplichte vaccinaties als arbeidsvoorwaarde. De ILO gaat er in haar recente *guidelines* uitgebracht door het ‘*Committee of Experts*’ wel van uit dat op het gebied van veiligheid en gezondheid op het werk, onder de beschermende maatregelen waartoe werkgevers verplicht zijn, ook vaccinaties kunnen vallen².

ILO Conventie no. 155 (*Occupational Safety and Health Convention, 1981*) en ILO Conventie No. 187 (*Promotional Framework for Occupational Safety and Health Convention, 2006*) vereisen hiervoor wel specifieke samenwerking tussen management en werknemers (de bond) op het ondernemingsniveau.

² *ILO Standards and COVID-19, Key provisions of international labour standards relevant to the COVID-19 pandemic and recovery, and guidance from the Committee of Experts on the Application of Conventions and Recommendations*, p. 29 en 30

Hoewel werkgevers een algemene verplichting hebben om ervoor te zorgen dat de werkplekken veilig zijn, is overleg met werknemers over alle aspecten van veiligheid, gezondheid en welzijn een essentieel element voor de besluitvorming. De samenwerking is van cruciaal belang voor de uitvoering van werkplek-gerelateerde preventiemaatregelen.

De ILO geeft aan dat zij vaccinaties eerder benadert als een recht van de werknemers dan als een plicht, zoals geregeld in de ILO Aanbeveling No. 157 voor verpleegkundig personeel (*Nursing Personnel Recommendation, 1977*). Die bepaalt dat in immunisatie moet worden voorzien met betrekking tot verplegend personeel dat regelmatig aan speciale risico's wordt blootgesteld.

ILO Aanbeveling No. 171 met betrekking tot arbeidsomstandigheden (*Occupational Health Services Recommendation, 1985*) stelt dat bedrijfsgeneeskundige diensten, waar mogelijk en passend, immunisaties zouden kunnen uitvoeren met betrekking tot biologische gevaren in de werkomgeving.

De ILO bepaalt in haar bovengenoemde *guidelines* dat, indien (op basis van specifieke omstandigheden van het specifieke beroep of de sector), een besluit over verplichte vaccinatie wordt genomen door de werkgever, deze op niet-discriminerende wijze dient te worden uitgevoerd, in overeenstemming met de vereisten van Conventie No. 111 (*Discrimination (Employment and Occupation) Convention, 1958*), en met inachtneming van specifieke omstandigheden met inbegrip van vrijstellingen.

Uit het bovenstaande blijkt dus dat de ILO een vaccinatie vanuit de werkgever niet zonder meer uitsluit, maar het is in casu sector- en werkplek-gebonden.

(3). Grondrechtelijke aspecten

De bestrijding van de epidemie heeft de overheid in de afgelopen periode genoodzaakt tot het treffen van ingrijpende maatregelen ter bescherming van de volksgezondheid. Ook op het moment van indiening van dit wetsvoorstel gelden er enkele vrijheidsbeperkende maatregelen. Gelet op de Grondwet en internationale mensenrechtenverdragen is het noodzakelijk om voor eventuele maatregelen die raken aan grondrechten een formele wettelijke basis te creëren, waarbij ook uitdrukkelijk inhoudelijke criteria worden opgenomen om voorzienbaar te maken welke maatregelen kunnen worden getroffen.

De noodzaak van overheidsoptreden ter bestrijding van de epidemie vloeit mede voort uit het recht op gezondheidszorg als mensenrecht. De Grondwet waarborgt dat de overheid maatregelen treft ter bevordering en bescherming van de volksgezondheid. De strekking van dit sociaal grondrecht komt overeen met hetgeen in internationale verdragen is bepaald. Zo brengt bijvoorbeeld artikel 12 van het Internationaal verdrag inzake economische en sociale en culturele rechten (IVESCR) mee dat het recht op een zo goed mogelijke lichamelijke en geestelijke gezondheid wordt erkend door de overheid en dat ter volledige verwezenlijking van dat recht maatregelen worden genomen, zoals maatregelen ter voorkoming, behandeling en bestrijding van epidemische en endemische ziekten alsmede van beroepsziekten en andere ziekten.

Overheidsmaatregelen ten behoeve van de (volks)gezondheid kunnen raken aan grondrechten, zoals het privéleven of bewegingsvrijheid. Als de maatregelen een beperking inhouden van vrijheidsrechten, dan moeten de maatregelen voldoen aan de zogenoemde beperkingsclausules, waarin de meeste van deze vrijheidsrechten voorzien.

Maatregelen kunnen slechts worden ingezet als zij een legitiem doel dienen. De bescherming van de volksgezondheid wordt bij een aantal grondrechten expliciet als doelcriterium genoemd. De maatregelen alsook de wettelijke basis dienen een legitieme doel en zal steeds kenbaar en voorzienbaar moeten zijn. Het is voorts proportioneel en in overeenstemming met het subsidiariteitsvereiste. Deze wet biedt de grondslag daartoe alsmede ten aanzien van de bij presidentieel besluit te treffen regelingen. Deze maatregelen kunnen worden getroffen ter bescherming van de (volks)gezondheid als legitiem doel, nu er sprake is van een epidemie van een infectieziekte. De specifiek te treffen maatregelen zijn noodzakelijk, waarbij sprake is van een dringend maatschappelijk belang en de vereiste proportionaliteit in acht wordt genomen.

Ten slotte dient er steeds een adequaat rechtsmiddel open te staan. Het type rechtsmiddel dat openstaat voor de maatregelen, waarin dit wetsvoorstel voorziet, is afhankelijk van het gebruikte handhavingsinstrument dan wel de opgelegde sanctie (bestuurlijk dan wel strafrechtelijk).

(4). Rechtspraak

Gelet op het vonnis van Stutgard/Donk vs de Staat Suriname (24 maart 2021; AR no. 210733) alsmede het vonnis van de Rechtbank Den Haag (06 oktober 2021; nr. C-09-618078-KG ZA 21-892) is het wel cruciaal dat de Regering als initiatiefnemer van de wet afgaat (en voortbouwende wetgevende handelingen pleegt) op basis van de noodzaak van de wettelijke maatregel vastgesteld door een gezondheidsautoriteit. Dat kan zijn de minister van Volksgezondheid, de Surinaamse ‘surgeon general’, het BOG of het Outbreak Management Team.

De Surinaamse kantonrechter ging gelet op de stand van de wetgeving en Nederlandse rechtspraak die in Suriname een goed toetsingskader kan zijn, voor zichzelf het volgende toetsingskader bij de beoordeling (van de eis of de regering te ver was gegaan in het beperken van grondrechten van burgers middels het bevelen van het dragen van de mond- en neusbedekking):

1. Er moet sprake zijn van buitengewone omstandigheden. Daarvan was in casu wel sprake volgens de rechter;
2. De beginselen van proportionaliteit en subsidiariteit moeten in acht worden genomen bij het doorvoeren van maatregelen waarbij grondrechten worden beperkt. Ten aanzien van de proportionaliteit was de rechter van oordeel dat de regering op het advies van het Outbreak Management Team (OMT) mocht afgaan;
3. Dat de vraag welke maatregelen moeten worden getroffen ter bestrijding van de coronacrisis en of die proportioneel en subsidiair worden getroffen, primair moeten worden beantwoord door de regering en de wetgevende macht (en dat de rechter zich terughoudend opstelt met betrekking tot de beoordeling van alzo gemaakte keuzes). Er ontstaat ruimte voor rechterlijk ingrijpen als het evident is dat bij de beperking van de grondrechten onjuiste keuzes zijn gemaakt, dus men in redelijkheid niet voor het gevoerde beleid heeft kunnen kiezen.

In verschillende vonnissen en naar het oordeel van het Nederlandse College Rechten van de Mens, mogen de grondrechten die hier aan de orde zijn, tijdelijk bij wet worden beperkt, onder zekere voorwaarden.

(5). Artikelsgewijs

Er is voor gekozen om de maatregelen in het kader van de verplichte vaccinatie voor de toegang tot voor het publiek toegankelijke plaatsen en specifieke besloten plaatsen in het nieuw artikel 6a van de Wet Uitvoering Burgerlijke Uitzonderingstoestand op te nemen, gelet op het tijdelijke

karakter dat aan deze maatregel wordt gegeven.

Het zal slechts gedurende de afkondiging van de COVID-19 Uitzonderingstoestand van kracht zijn (artikel 6a lid 1). In dit zelfde kader is daarom ook niet gekozen voor een algemene vaccinatieplicht (rechtstreekse verplichting voor een ieder), zoals dat het geval is ten aanzien van een aantal ziekten ingevolge het Vaccinatie Decreet 1982 (S.B. 1983 no. 21).

In ARTIKEL I onder A is een nieuw onderdeel g toegevoegd, luidende: besloten plaats.

Een besloten plaats, niet zijnde een woning is een niet voor een ieder toegankelijke plaats, zoals een erf of loods. Ook fabrieks- of bedrijfsruimten vallen niet onder het begrip ‘woning’ (zie in dit kader de Toelichting van art 126k Nederlandse Strafvordering in de literatuur, Tekst en Commentaar, C.P.M. Cleiren en J.F. Nijboer, 8^e druk).

De jurisdictie van de Arbeidsinspectie is echter niet beperkt tot woningen en kunnen die, indien er indicaties zijn dat daar arbeid wordt verricht, ook worden betreden, weliswaar onder enige in de Wet Arbeidsinspectie (S.B. 1983 no. 42, zoals gewijzigd bij S.B. 2017 no. 39) genoemde voorwaarden. De bijzondere maatregelen met betrekking tot de vaccinatie zullen gelden op de werkplekken die tegelijkertijd woningen zijn. Hier valt te denken aan de in ILO Conventie No. 190 genoemde ‘domestic workers’ oftewel huishoudelijke werknemers die in gelijke mate dienen te worden beschermd.

Onder B is een nieuw artikel 6a toegevoegd, waarin maatregelen zijn opgenomen specifiek gericht op de bestrijding van COVID-19.

Ingevolge artikel 6a lid 2 worden bij presidentieel besluit de voor het publiek toegankelijke en besloten plaatsen aangewezen, waarbij voor de toegang of om aldaar aanwezig te zijn, voldaan dienen te worden aan de in dat presidentieel besluit gestelde voorwaarden.

Het betreft die plaatsen waar personen bij elkaar zijn, waarbij kennelijk sprake is van een zekere samenhang of omstandigheid.

In artikel 6a lid 2 zijn, ten aanzien van de aan te wijzen plaatsen in ieder geval genoemd plaatsen waar arbeid wordt verricht of pleegt te worden verricht of ten aanzien waarvan redelijkerwijze kan worden vermoed dat aldaar arbeid wordt verricht. Deze plaatsen kunnen een publieke, maar ook een besloten karakter hebben of een combinatie daarvan, en zijn, gelet op hun karakter bij uitstek de plaats waarbij personen gedurende een bepaalde tijd bij elkaar zijn en waar de kans op besmettingen erg groot aanwezig is. De overige bij presidentieel besluit aan te wijzen plaatsen zullen in het bijzonder betrekking hebben op die plaatsen, waarbij (grote) groepen van personen bij elkaar zijn, zoals evenementen.

In artikel 6a lid 3 is specifiek wettelijk vastgesteld welke voorwaarde in elk geval gesteld kan worden. Er kunnen namelijk ook andere minder ingrijpende voorwaarden worden gesteld, zoals de inachtneming van hygiënische maatregelen, die eveneens reeds een grondslag hebben in het algemeen artikel 6.

De specifiek in artikel 6a lid 3 van deze wet gestelde voorwaarde is dat voor de toegang tot de in lid 2 bedoelde plaatsen of voor het aldaar aanwezig zijn, de personen bewijs moeten kunnen leveren van volledig gevaccineerd zijn tegen SARS-COV-2 of een in dat presidentieel besluit vastgesteld door de overheid erkend SARS-COV-2 antigeen-sneltest, die niet ouder is dan 24 uur. Het voorgaande laat onverlet de mogelijkheid voor degene die niet is gevaccineerd toch de toegang tot bedoelde plaatsen te verkrijgen of om aldaar aanwezig te zijn, indien deze een negatieve SARS-

COV-2-RT PCR test of SARS-COV-2 antigeen-sneltest kan overleggen. Daarmee wordt eveneens voldaan aan het doel waarvoor deze maatregel wordt ingesteld.

Ten aanzien van voornoemde verplichting zijn in de tweede volzin van artikel 6a lid 3 uitzonderingen opgenomen. De in de eerste volzin genoemde verplichting tot overlegging van een bewijs van vaccinatie of van de daarin genoemde testen is niet van toepassing op:

- a. een persoon tot en met de leeftijd van twaalf jaar of
- b. een persoon waarvan wegens medische gronden vaccinatie tegen SARS-COV-2 of het uitvoeren van genoemde testen ongewenst is of achterwege behoort te blijven, zulks blijkende uit een door een medische specialist afgegeven verklaring of
- c. een persoon met religieuze gewetensbezwaren.

De tot nu toe ontwikkelde en door de WHO goedgekeurde vaccins hebben betrekking op personen boven de 12 jaar.

In lid 4 is eveneens voorzien in een uitzondering, waarbij voor de toegang kan worden volstaan met een eerste vaccinatieprik, in de gevallen waarbij voor een volledige vaccinatie meer dan één keer dient te worden gevaccineerd. De toegang met de eerste vaccinatieprik is toegestaan tot de datum op de vaccinatiekaart waarop de tweede en laatste vaccinatieprik dient te zijn ontvangen. Dit dient om te voorkomen dat werknemers en anderen hun vaccinatie onvolledig laten en hun tweede tevens laatste vaccinatieprik niet halen.

In lid 5 wordt de zorgplicht tot handhaving van voornoemde verplichting eveneens gelegd in handen van degenen die ten aanzien van de aangewezen plaatsen enige verantwoordelijkheid hebben. Op de eerste plaats zijn dat de eigenaar en werkgever.

De werkgever, de eigenaar of het hoofd of de bestuurder en het opzichthoudend personeel of degene die verantwoordelijk is voor de in lid 2 bedoelde plaatsen of die bevoegd is tot het treffen van voorzieningen met betrekking tot de toegang daartoe, draagt zorg dat de personen aan wie toegang worden verleend tot die plaatsen of om aldaar aanwezig te zijn, voldoen aan de krachtens de leden 2 en 3 gestelde voorwaarden.

Benadrukt dient te worden dat de handhavingsbepalingen en sancties ingevolge de artikelen 9 e.v. van toepassing zijn (zie onderdeel C).

Paramaribo, de

CHANDRIKAPERSAD SANTOKHI

PRODUKTIE 11

Ruim 110 kerken zullen vaccinatiedwang niet accepteren

28 Oct, 00:00



Leiders van diverse kerkelijke organisaties hebben woensdag een persconferentie gehouden waarbij zij aangeven vaccinatiedwang niet te zullen accepteren.

75 kerken van Gods Bazuin verspreid in alle districten, 12 kerken van Logos International, 9 kerken van Bribi Ministries en anderen hebben een ferm standpunt ingenomen tegen directe en indirecte vaccinatiedwang. Om Bijbelse redenen zijn ze faliekant tegen elke vorm van vaccinatiedwang. "Zelfs God dwingt geen enkel mens Hem te dienen en te volgen, omdat Hij ons heeft geschapen met een vrije wil, en dat respecteren wij en daar willen wij ons aan houden!". Het standpunt werd tijdens een persconferentie woensdag verwoord door bisschop Steve Meye.

De afgelopen periode is volgens de kerken geconstateerd dat de regering een beleid heeft gevoerd van angst zaaien, polarisatie van de bevolking, haatzaaij, schoffering en criminalisering van een deel van de samenleving, het officieel instellen van een 'apartheidsregime'. Aangevoerd wordt dat de democratie losgelaten is en gekozen wordt voor het opereren in een totalitaire Staat. Ruim de helft van de bevolking wordt volgens de kerkelijke leiders brodeloos gemaakt. Op grond van deze constatering, veroordelen de ruim 110 evangelische organisaties met klem de ontwikkelingen in Suriname.

"Wij doen een zeer dringend beroep op de huidige regering van Suriname om dit heilloze pad per onmiddellijk te verlaten, zodat vrede en harmonie terugkeren in ons geliefd land. Wij herinneren u eraan dat wij, het volk van Suriname, de macht hebben in dit democratisch land, en zijn derhalve de enige bevoegden om het mandaat, dat wij u overigens gegeven hebben voor een korte periode, terug te nemen!"

De kerkelijke organisaties zeggen geenszins te zullen toestaan dat de regering doorgaat met het onderdrukken van het volk. De 'vaccinatiedwang', medische discriminatie, haatzaaij, polarisatie, segregatie en apartheid zal nooit geaccepteerd, getolereerd of gedoogd worden. Vicepresident Ronnie Brunswijk wordt gewaarschuwd dat hij verantwoordelijk gehouden zal worden voor het verval. Hij houdt de regering in stand, werd aangegeven op de persconferentie. "Daag ons alstublieft niet uit, om ons, aan u geleend mandaat, binnen de kortste keren terug te nemen!" stelde Meye.

Van Dijk-Silos: Er is wel degelijk vaccinatiedwang

21 Nov, 08:52



Jennifer van Dijk-Silos tijdens de protestdemonstratie die zaterdag is gehouden door Verontruste Burgers, Kerkgenootschappen en Vakbonden. (Foto: René Gompers)

Jennifer van Dijk-Silos, een van de organisatoren van de protestmanifestatie tegen vaccinatiedwang, vindt dat Javier Asin, coördinator van het Nationaal Coördinatie Team, de taal van zijn baas spreekt. "Het is een **grote leugen** dat mensen niet gedwongen worden om zich te vaccineren tegen Covid-19. De overheid beweert eeuwig dat mensen niet gedwongen worden, maar dwang is niet dat je iemand optilt en brengt om te vaccineren. Er wordt indirecte dwang toegepast door mensen te verplichten zich te vaccineren, anders mogen zij zich niet op de werkvloer begeven", zegt Van Dijk-Silos in een reactie aan Starnieuws.

De overheid en het bedrijfsleven dwingen werknemers om zich te vaccineren, anders mogen ze niet aan het werk verschijnen. Ze worden verplicht om een PCR-test te doen. Indien ze niet voldoen aan de voorwaarden, wordt hun afwezigheid als onwettig beschouwd. Hierdoor kunnen zij ontslag krijgen. Van Dijk-Silos merkt op dat mensen uit broodvrees zich toch laten vaccineren anders kunnen ze geen eten op tafel leggen voor hun gezin, hun huur niet betalen en niet voldoen aan de vele verplichtingen.

Van Dijk-Silos voert aan dat Asin bliksemgoed weet dat mensen geïntimideerd worden. Niet omdat er geen wet is, betekent het niet dat mensen door het beleid van de overheid en het bedrijfsleven niet worden gedwongen om tegen hun wil om zich te laten vaccineren. Er is eerder een gesprek geweest met Asin, maar daarna kwam minister Albert Ramdin als eerste met de mededeling dat alleen gevaccineerden toegang hebben tot het ministerie. Van Dijk-Silos heeft toen aan Asin gevraagd of dialoog nog zin heeft. Volgens haar heeft Asin bevestigd dat het geen zin heeft. "En nu stelt hij dat hij dialoog wil. Wel hij kent mijn telefoonnummer en kan mij altijd bellen als hij wil praten".

Over de bewering van hart- en longchirurg Pieter Voight dat er **geen medische discriminatie** plaatsvindt bij hulpverlening, zegt Van Dijk-Silos dat de organisatie dan gedwongen wordt namen te noemen. Er vindt onderzoek plaats, waarna teruggekomen wordt op deze kwestie. Er wordt volgens haar alles aan gedaan om de protesten te boycotten, maar dat zal niet lukken, merkt ze op. Er komt steeds meer informatie naar buiten dat het immuunsysteem niet wordt versterkt door de vaccins. "Het is absoluut niet waar dat het om fakeberichten gaat en verouderd nieuws. De organisatie is vastberaden door te gaan met protesten, waarbij diverse tactieken zullen worden gebruikt."

Organisaties laten hun stem horen tegen vaccinatiedwang

19 Aug, 00:00

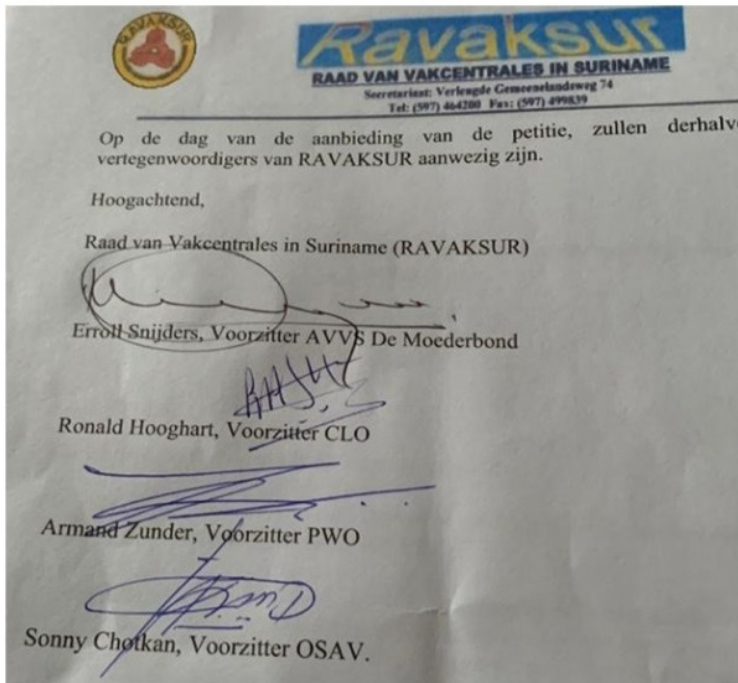
Religieuze organisaties, Ravaksur, vakbonden en individuen stellen de toenemende apartheid en discriminatie aan de kaak. Zij vinden dat burgers, onder wie werknemers, niet gedwongen moeten worden om zich te vaccineren. Jennifer van Dijk-Silos, een van de initiatiefnemers, zegt aan StarNieuws dat het de bedoeling was om de petitie aan president Chan Santokhi aan te bieden. Er is op 6 augustus een brief geschreven naar de president, maar deze is verwezen naar de juridische adviseurs. Om het momentum niet te verliezen is ervoor gekozen om de petitie aan waarnemend president Ronnie Brunswijk aan te bieden vrijdag.



Jennifer van Dijk-Silos

Van Dijk-Silos zegt dat de aanbieders van de petitie in dialoog willen gaan met de regering. De rechten van burgers worden geschonden door de directe en indirecte vaccinatiedwang. Minister Amar Ramadhin heeft de vorige week aangekondigd dat er 180.000 doses Pfizer vaccins binnenkort verwacht worden. Dan zullen ook kinderen vanaf 12 jaar worden gevaccineerd. Volgens Van Dijk-Silos worden hierdoor ook kinderrechten geschonden. Zij voert aan dat in Israël bewezen is dat Pfizer het immuunsysteem kapot maakt.

Een kleine groep is de petitie gestart, maar intussen hebben anderen, waaronder Ravaksur en diverse vakbonden zich ook aangesloten. Ravaksur stelt in een ondersteuningsbrief aan de president dat er sprake is van discriminatie op basis van medische persoonskenmerken. Veel werknemers ondervinden de discriminatie aan den lijve en worden hier het slachtoffer van. Enkele lidbonden van Ravaksur hebben samen met kerkgenootschappen schriftelijk een audientie aangevraagd om de petitie aan te bieden. Ravaksur heeft besloten de aanbieding van de petitie te ondersteunen, omdat zij zich kan terugvinden in de inhoud.



Krachtig protest tegen vaccinatiedwang; verzet aangekondigd

12 Oct, 11:45



Verontruste burgers, kerkgemeenschappen, vakbondsleiders en Assembleeleden hebben hun stem laten horen tegen vaccinatiedwang. (Foto's: René Gompers)

Op het Onafhankelijkheidsplein is krachtig aangegeven dat vaccinatiedwang niet zal worden geaccepteerd. Verontruste burgers, vakbondsleiders, kerkgemeenschappen en Assembleeleden hebben allen afgekeurd dat de regering door haar beleid mensen verplicht om zich te vaccineren. Hiermee wordt verdeeldheid, haatzaaijerij, apartheid gecreëerd. Onder leiding van apostel Steven Reyme is geprotesteerd tegen de discriminatie.

Er is een wet in de maak over Covid-vaccinatie. Intussen worden mensen die niet gevaccineerd zijn of geen recent PCR-test kunnen overleggen waaruit blijkt dat ze negatief zijn, geweerd van onder andere diverse overheidskantoren, restaurants, werkplekken. De Assembleeleden Edward Belfort, Ebu Jones, Rabin Parmessar, Stephen Tsang en Melvin Bouva kregen ook de gelegenheid om het woord te voeren.



Alle sprekers hebben te kennen gegeven dat dwang niet geaccepteerd zal worden. Er zal strijd geleverd worden tegen het beleid van de regering en de wet die in de maak is. De Covid-situatie wordt aangegrepen om verdeeldheid te zaaien onder het volk.

Paramaribo, vrijdag 06 augustus 2021

De President van de Republiek Suriname
Z.E. Chandrikapersad Santokhi
Onafhankelijkheidsplein
Paramaribo

Betreft: **aanbieding petitie 'Apartheid en Discriminatie in Suriname'**

Zijne Excellentie,

Volgaarne verzoeken wij dringend uw aandacht voor het onderstaande.

Op 6 juli 2021 is er een petitie gestart om de steeds toenemende apartheid en discriminatie in Suriname aan de kaak te stellen.

Er is met name sprake van apartheid en discriminatie op basis van medische persoonskenmerken. Vele burgers van Suriname ondervinden dit aan den lijve en worden hier het slachtoffer van. Zij die de moed durven opbrengen om hiertegen hun stem te laten horen, hebben de petitie ondertekend.

Namens hen, alsook namens allen die niet bij machte zijn hun stem te laten horen, wensen ondergetekenden u deze petitie en de handtekeningenlijsten aan te bieden.

Wij verzoeken u om krachtig op te treden tegen de aanstichters van apartheid en discriminatie, zodat deze negatieve ontwikkeling in Suriname een halt wordt toegeroepen.

Suriname heeft het Internationaal Verdrag inzake Burgerrechten en Politieke Rechten (beter bekend als het BUPO-verdrag) geratificeerd op 28 december 1976. Hiermee is Suriname officieel toegetreden tot het BUPO-verdrag en maakt dit verdrag sindsdien deel uit van de Surinaamse rechtsorde.

Het BUPO-verdrag legt directe verplichtingen op aan de Staat Suriname in die zin, dat de staat zich verbindt om de in het verdrag erkende rechten te eerbiedigen en die aan een ieder te verzekeren die binnen haar grondgebied verblijft en aan haar rechtsmacht onderworpen is.

Een van die rechten is verwoord in artikel 7 van het BUPO-verdrag, dat bepaalt dat niemand, zonder zijn in vrijheid gegeven toestemming, mag worden onderworpen aan medische of wetenschappelijke experimenten. De situatie in Suriname kan getypeerd worden als hetgeen de Joden hebben moeten ondergaan in de Tweede Wereldoorlog, waarvoor de internationale wereld de Neurenberg Code heeft ontwikkeld: te uwer informatie moge dienen dat deze medische experimenten breed op andere volkeren zijn toegepast en dus gedefinieerd kunnen worden als misdaden tegen de menselijkheid.

Handwritten signatures and initials in blue ink at the bottom of the page, including names like 'Arwel.5' and 'Arduant'.

Artikel 7 van het BUPO-verdrag is een onvervreemdbaar recht, dat wil zeggen dat ook niet bij een noodtoestand of via noodwetgeving van deze bepaling mag worden afgeweken.

Het is ons bekend dat vele actoren in het bedrijfsleven hun werknemers op een onmenselijke manier, op dreiging van ontslag, dwingen om zich te laten "vaccineren" en of verplichten om wekelijks een peperdure (onbetrouwbare) PCR test te ondergaan, die ze ook nog zelf moeten betalen. Hierdoor komen deze werkgevers bewust aan het brood van de werknemers waardoor zij onder zeer zware pressie zich toch laten inspuiten. Dit is (indirecte) dwang en dat is in strijd met het BUPO-verdrag. Dit betekent dat hetgeen de arme loontrekkers van ons land overkomt verwerpelijk is en strijdig met de openbare orde.

Wij zien de onverkorte naleving van artikel 7 van het BUPO-verdrag tegemoet.

Gelet op de urgentie van het onderhavige verzoeken wij u ons binnen een week na dato van dit schrijven te ontvangen voor de formele aanbieding van de petitie aan u.
De aanbieding kan ook geschieden aan een door u aan te wijzen vertegenwoordiger.

Hoogachtend,

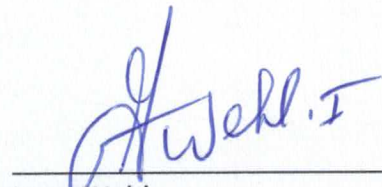


Bisschop Dr. Steve Meye
Gods Bazuin Ministries International

Ronald Hooghart, Voorzitter
Centrale van Landsdienaren
Organisaties CLO



Giorgy Gimith, Senior Pastor
BRIBI Ministries International



Imro Wehl
Algemene Werknemers Bond AWB

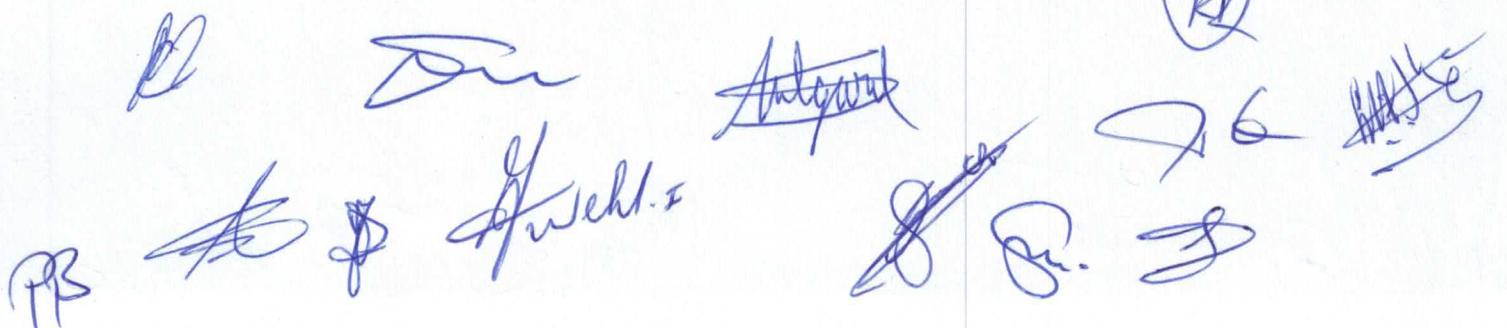
Hugo Blanker, Voorzitter
Confederatie van Organisaties van Voor.
Landsdienaren COL



Apostel Carlo Misiekaba, Voorzitter
Vereniging van Volle Evangelie en
Pinkstergemeenten en -bedieningen in
Suriname VVEPS



Hugo Blanker, Voorzitter
Confederatie van Organisaties van Voor.
Landsdienaren COL





Lloyd Pool, Voorzitter
**Algemene Bond van Personeel in dienst
van het Landsbedrijf Academisch Ziekenhuis
A.B.P.L.A.Z.**



Apostel Steven Reyme
LOGOS International Ministries



Michael L. Sallons, Voorzitter
**Werknemers Organisatie Openbare
Werken WOOW**




Michael L. Sallons, Voorzitter
**Bond van Personeel de Stichting
Volkshuisvesting Suriname BPSVS**



Michael L. Sallons, Voorzitter
Ligeon Werknemers Organisatie LWO



mr. dr. Jennifer Van Dijk-Silos



Ricky W. Stutgard M.Sc.




Karel Donk



Avinash Badaltjawdharie MSc



mr. Patrick Bhagwandin



PRODUKTIE 12

NEWS

An epidemic of cardiac arrests in call-out data



PAGE 3

SOLUTIONS

Revolution is not a resolution but localisation could be



PAGE 13

INTERNATIONAL

Ukraine crisis accelerating digital currencies



PAGE 16

HEALTH

Covid protocol - over 1,100 patients successfully treated



PAGE 21

THE



LIGHT

Issue 20

The Uncensored Truth

thelightpaper.co.uk

FREE



How the world was conned

Review of the film *The Viral Delusion*, PAGE 6

Pfizer knew their vaccine would kill

Own data show shocking number of fatalities and side effects now officially associated with covid shots

THE documents were first leaked in a cyber attack on the European Medicines Agency website. More than 40 megabytes of classified information from the agency's review were published on the dark web, and several journalists including those at the British Medical Journal were sent copies of the leak.

In the U.S., the Food and Drug Administration had previously agreed to withhold the documents and their jaw-dropping revelations from the public for 75 years, until Texas District Judge Mark Pittman ordered their release within eight months, stating it was 'of paramount public importance'.

Most alarmingly of all, the documents show that in the trials there were at least 1,223 deaths reported in the first 28 days after injection.

The NHS, media and the government continually state that the vaccines are 'safe and effective' while those that report vaccine-related injuries via the Yellow Card scheme are often accused of making false correlations or imagining their symptoms.

However, the Pfizer documents

by **JANINE GRIFFITHS**

paint a very different picture, listing thousands of side effects that occurred at an alarming rate, which were as a direct result of taking the experimental genetic injection.

According to their report, Pfizer hired 600 extra staff to handle the sheer number of adverse reactions from its covid-19 shot, and said it had planned to hire 1,800 in total.

Serious side effects included, but were not limited to: auto-immune disorders; blindness; diabetes; herpes; heart problems such as myocarditis; thyroid disorders; neurological conditions such as multiple sclerosis; seizures; epilepsy; narcolepsy and Guillain-Barré Syndrome.

Non-fatal conditions such as eczema, blisters, asthma, fertility problems, inflammatory bowel disease, deafness and even tongue biting are also listed among the side effects by Pfizer.

While it has been approved for use in pregnant women, it is also known to cause pregnancy complications, including many spontaneous abortions. One of the many issues it causes is anaphylactoid syndrome of pregnancy or ASP for short.



ASP is a fatal disease for mothers and is among the leading causes of maternal mortality. Symptoms include severe bleeding, confusion, shortness of breath and anxiety. There is therefore a high risk for pregnant women taking the covid 'vaccine'.

The Pfizer document also lists various blood disorders, Crohn's disease and liver failure as side effects. Blood clotting was another issue reported from the trials.

One of the most telling side effects listed is... covid-19. Proponents often argue that despite the possible side effects associated with some of the covid shots, they at least prevent people from dying from covid-19.

The problem is that the 'vaccine' actually causes people to develop the disease, and so it is contributing to the number of cases, listing covid-19-associated pneumonia as a side effect.

Some may argue that these problems are only associated with the Pfizer shot, but death and serious injuries have been present and publicly acknowledged with all of the manufacturers' injections.

Research developed by Edinburgh University showed that almost 350 Britons have been struck down with a rare clotting disorder after getting the AstraZeneca vaccine.

These blood clots cause minor bruising around the body and can leave some with a purple-dotted rash.

The Moderna vaccine has been associated with heart problems such as myocarditis and pericarditis. Their list of adverse reactions also includes inflammation, fainting and breathing difficulties.

Data from the UK Health Security Agency (UKHSA) in the table on page 2 has also revealed that both covid-19 deaths and cases were worse in vaccinated people, particularly those over the age of 18. The official data is clear: the chances of developing covid-19 increases significantly following subsequent 'booster' jabs.

This is broadly in line with the information contained in the Pfizer document, which states that the shots cause covid-19 and respiratory illnesses.

Coupled with the fact that ONS data recently revealed that covid deaths were much lower than previously thought, the risks of taking the vaccine seem to greatly outweigh the risks of not doing so.

■ **For sources please see page 2**
 ■ **Janine Griffiths is founder and editor of akashictimes.co.uk**

THE LIGHT PAPER APR 2022

Distributed independently to remain fiercely free from the establishment we seek to hold to account.

Original content is © 2022 thelightpaper.co.uk

For all distribution and bulk order enquiries, please email: lightdistribution@mailbox.org

For advertising enquiries, please contact Nicola at: ads@thelightpaper.co.uk

If you like what we do, please get involved and show someone else this truthpaper. Visit our website:

thelightpaper.co.uk

Editor: Darren Smith
Sub-editor: Harry Wundas

Layout: Miki Kay

Distribution: Cath Swann & Matt Smith

Advertising: Nicola Kelly

Subscriptions: Ross & Rebecca Penname

Social Media: Jessica Paris & Nicola Kelly

Proof-Reading: David K, Alan I, Stevie M, Jerry R, Tracy S, Silke H, Adrian L

Lighthouse logo: Artist Samantha S and Adrian W Photographic

Special thanks to our warehouse hubs & distributors who work tirelessly to bring you the uncensored news. To keep our paper FREE is not free - you can help by ordering advance copies, donating or subscribing at: thelightpaper.co.uk

“The world is a business, Mr. Beale.”
- Network 1976

<<< Continued from page 1

Pfizer vaccines kill - references

Pfizer documents:

- <https://phmp.org/pfizers-documents> (Postmarketing Experience 5.3.6)

Confirmation of data leak:

- <https://www.ema.europa.eu/en/news/cyberattack-ema-update-5>
- <https://www.bmj.com/content/372/bmj.n627>

Judge orders FOIA expedited:

- <https://www.reuters.com/legal/government/paramount-importance-judge-orders-fda-hasten-release-pfizer-vaccine-docs-2022-01-07/>

Astra-Zeneca problems:

- https://www.ed.ac.uk/files/atoms/files/scotland_firstvaccinated_preprint.pdf
- <https://www.gov.uk/government/publications/freedom-of-information-responses-from-the-mhra-week-commencing-13-september-2021/freedom-of-information-request-on-blood-clotting-following-astrazeneca-covid-19-vaccine-foi-21937>

Table 10. COVID-19 cases by vaccination status between week 5 2022 and week 8 2022
Please note that corresponding rates by vaccination status can be found in Table 13.

Cases reported by specimen date between week 5 2022 (w/e 6 February 2022) and week 8 2022 (w/e 27 February 2022)	Total	Unlinked*	Not vaccinated	Received one dose (1 to 20 days before specimen date)	Received one dose, 21 days before specimen date	Second dose ≥14 days before specimen date ¹	Third dose ≥14 days before specimen date ¹
[This data should be interpreted with caution. See information below in footnote about the correct interpretation of these figures]							
Under 18	244,403	11,642	169,482	2,588	40,627	18,961	1,103
18 to 29	197,577	15,845	27,313	816	10,460	54,092	89,051
30 to 39	210,906	12,215	24,469	420	6,525	44,602	122,675
40 to 49	187,850	8,738	13,228	197	3,261	25,954	136,472
50 to 59	144,909	6,562	5,871	81	1,417	12,030	118,948
60 to 69	86,258	3,890	2,263	36	617	4,051	75,401
70 to 79	59,250	2,188	932	19	302	1,501	45,308
80 or over	32,706	2,850	755	7	296	1,607	26,991

* Individuals whose NHS numbers were unavailable to link to the NIMS.

<https://www.health.gov.au/initiatives-and-programs/covid-19-vaccine-claims-scheme>

- <https://www.health.gov.au/initiatives-and-programs/covid-19-vaccine-claims-scheme>

Deaths/Cases higher among jabbed (page 41 onwards):

- https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1058464/Vaccine-surveillance-report-week-9.pdf

Problems with Moderna vaccine:

- <https://www.marketwatch.com/story/blood-clots-as-prevalent-with-pfizer-and-moderna-vaccine-as-with-astrazenecas-report-2021-04-15>

MHRA LATEST



MHRA Yellow Card Reporting

2,075 DEATHS

1,475,298

ADVERSE REACTIONS

Data correct as of:

24/03/2022

Search 'summary of yellow card reporting' - on the UK government's website, scroll down to the bottom of annex 1 and click the print analysis for each 'vaccine' maker. Reports are made by patients or their doctors but it is estimated that only around 5-10% of all reactions are reported.

THIS IS A NATIONAL SCANDAL. COVID 'VACCINES' ARE KILLING AND INJURING PEOPLE, AND IT IS BEING SWEEPED UNDER THE CARPET BY GOVERNMENT AND MEDIA.



BOB '22 © THE DEMOCRACY FUND

Artwork: bobmoran.co.uk

mRNA-vaccins komen steeds meer onder vuur te liggen

BREAKING

Fotografie: Mike Kruisen



DUIZENDEN BIJWERKINGEN, 1223 PROEF-PERSONEN OVERLEDEN

Negatief advies
De Deense profes
Benn, die al 30 ja
een gerespecteerd
absoluut voor vac
zich duidelijk ui
we momenteel v
jonger dan 50 ja
mRNA-vaccins"
veel negatieve b
bijeffecten".

Effectiviteit en v
schroeven
De gerenomme
Matthies van "h
Duitland" riep
dernemen" na t
miljoen gevallen
thes van het aca
rité in Berlijn z
keer meer "err
Covid-19-vacci
dan officiële D
kend. Matthe
'Pfizer Papers'
veiligheid op
men te staan.

Professor Ma
onderzoek uit
profiel van Cov
onderzoeken v
mensen, heeft
heeft geworst
kingen". "Het
legt Matthies
wat bekend
Zweden, Isra
ben zelfs de
in hun stud
vastgesteld

Matthies
coprofiel v
afkomstig
(PEI), ond
Volksgezo
is voor de

Het PEI st
acties opt
1000 toeg
van de efi
thes heeft
gewrichts
tie van h
logische
artsen ac
prevalent
"openlijk
baar mo
ti-vaccin

► Deze
profe
aanra

80.000 pagina's aan geopenbaarde documenten van vaccinfabrikant Pfizer leveren aardig wat narigheid op. 1223 van de 42.086 proefpersonen overleden binnen vier weken na toediening van het Pfizer-'vaccin'. Ook de effectiviteit van de Pfizer- en Moderna-injecties valt tegen.

Huib Rutten

De Pfizer-studie liet daarnaast duizenden - ook zeer ernstige - bijwerkingen zien. Ook blijkt dat het Pfizer-'vaccin' slechts 12-15 procent effectief was in het voorkomen van infectie in het algemeen. Dat percentage daalde al snel tot minder dan 1 procent - ondanks dat politici en gezondheidsfunctionarissen beweerden dat de effectiviteit minstens 90 procent zou zijn.

Ze logen dus, maar hierover, en over de zorgwekkende resultaten, zwijgt het kabinet in Den Haag. Evenmin laten artsenberoepsgroepen zich hierover uit. Dit

Placebo scoort beter

Moderna kwam onlangs ook in het nieuws met onderzoeksgegevens die ze al anderhalf jaar bezitten. Het Moderna-'vaccin' (net als die van Pfizer, AstraZeneca en Janssen) is slechts gericht op één virus-eiwit, namelijk het spike-eiwit. Het Sars-Cov-2 virus bestaat echter uit nog een aantal eiwitten en bij infectie maakt het immuunsysteem dan ook antistoffen tegen al die verschillende eiwitten. Er werd onderzocht wat het effect was op één ander belangrijk eiwit (anti-N) na een infectie. Het betrof een studie waarbij placebo met Moderna vergeleken werd. Belangrijkste bevindingen waren dat ná vaccinatie met Moderna maar 40 pro-

dan zal het voor het virus moeilijker zijn immuunvluchteigenschappen te ontwikkelen zoals die van omikron, die in wezen de immuniteit ontwijkt.

Statistische illusie

Toch blijven beleidsmakers en veel medici naar het succes van de vaccins wijzen. Echter, systeemfouten of vooroordelen kunnen leiden tot conclusies die het omgekeerde van de werkelijkheid zijn. Bijvoorbeeld: het simpelweg een week te laat melden van sterfgevallen wanneer een vaccinprogramma wordt uitgerold zal (met statistische zekerheid) leiden tot succes van elk vaccin, zelfs een placebo, om de mortaliteit schijnbaar te verminderen.

"Op basis van wat

Duitse verzekeringsmaatschappij: “tienduizenden overlijdens door vaccinaties”

Van onze redacteur

Het aantal overlijdens en ernstige schadegevallen als gevolg van de coronavaccinaties in Duitsland is vele malen hoger dan uit officiële cijfers blijkt. Dat stelt Andreas Schöfbeck, bestuurslid van de Duitse verzekeringsmaatschappij BBK dat 10,9 miljoen verzekerden als klant heeft, in een interview met het Duitse dagblad Die Welt. Schöfbeck heeft een brief gestuurd aan het Paul Ehrlich Institut (PEI) dat in Duitsland de bijwerkingen van de vaccinaties registreert. Het PEI meldde tot dusver

“Onethisch om gegevens niet naar buiten te brengen”

38 bijwerkingen per 100.000 gevaccineerden. In Nederland ligt dat cijfer op 701.

Volgens Schöfbeck zijn de werkelijke cijfers in Duitsland veel hoger. Op grond van de gegevens onder haar verzekerden, stelt BKK dat er 216.695 bijwerkingen zijn gemeld waarbij behandeling door een arts nodig was. Geëxtrapoleerd naar de hele bevolking gaat het om 2,5 tot 3 miljoen mensen die behandeling nodig hebben gehad. Daarbij gaat het om 31.000 mensen die zijn overleden en 412.000 die zware bijwerkingen hebben ondervonden, waarvoor ze naar het ziekenhuis moesten. Schöfbeck noemt de gegevens een “alarmsignaal”. Het zou “onethisch zijn om ze niet naar buiten te brengen”, zei hij tegen Die Welt. ■



**Bundesamt
für Bevölkerungsschutz
und Katastrophenhilfe**

PRODUKTIE 13

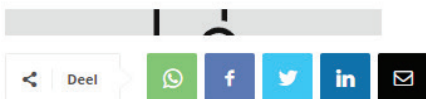
Home > Onderwerpen > Justitie en politie > Man dood neergevallen aan de Zonnebloemstraat

Onderwerpen Justitie en politie Nieuws uit Suriname Uitgelicht

Man dood neergevallen aan de Zonnebloemstraat

11 april 2022

2



Aan de Zonnebloemstraat in Suriname is een man vanmorgen dood neergevallen. Dit gebeurde rond 11.00u voor de Maria Hartmannschool.

De man lag roerloos deels uit zijn voertuig, deels op het trottoir. Hij werd door omstanders uit het voertuig gehaald en op de grond geplaatst.

Een ambulance van het Academisch Ziekenhuis werd ingeschakeld. Bij aankomst werd door het ambulancepersoneel geconstateerd dat de man geen teken van leven meer vertoonde.

Home > Onderwerpen > Justitie en politie > 54-jarige man valt dood neer tijdens maaiwerkzaamheden

Onderwerpen Justitie en politie Nieuws uit Suriname Uitgelicht

54-jarige man valt dood neer tijdens maaiwerkzaamheden

20 juni 2022

2



De 54-jarige Randolf De Vries is zondag tijdens maaiwerkzaamheden, plotseling dood neergevallen. Dit gebeurde aan de Abigaellustweg in Suriname.

De Vries was bezig te maaien met een brushcutter, toen hij bewusteloos neerviel. Er werd een ambulance ingeschakeld en het personeel dat ter plaatse arriveerde, merkte dat de man geen polsslag meer had.

Een arts stelde de dood officieel vast. Volgens de arts heeft het slachtoffer vermoedelijk een hartstilstand gekregen. Na afstemming met het Surinaamse Openbaar Ministerie is het ontzield lichaam afgestaan aan de nabestaanden.

Home > Onderwerpen > Justitie en politie > Taxichauffeur overleden in eigen auto; doodsoorzaak nog onbekend

Onderwerpen Justitie en politie Nieuws uit Suriname Uitgelicht

Taxichauffeur overleden in eigen auto; doodsoorzaak nog onbekend

11 april 2022

1



Een 47-jarige taxichauffeur is afgelopen nacht rond 04.15u in zijn eigen voertuig overleden. Dit gebeurde aan de Tajerbladstraat in Suriname.

De man genaamd Jerry S., werd in z'n auto aangetroffen door enkele bezoekers van een bar, die op zoek waren naar een taxi. Ze liepen naar de auto en dachten in eerste instantie dat de man in het voertuig sliep.

Ze tikten op de autoruit en ontdekten dat de taxichauffeur in ademnood verkeerde. Ze sloegen gauw een van de autoruiten stuk om de man te redden, maar het bleek dat de taxichauffeur zijn laatste adem had uitgeblazen. Hij overleed ter plaatse.

Home > Onderwerpen > Justitie en politie > Vrouw raakt onwel in bus en komt te overlijden

Onderwerpen Justitie en politie Nieuws uit Suriname Uitgelicht

Vrouw raakt onwel in bus en komt te overlijden

11 april 2022

5



De ambulance werd ingeschakeld door de politie.

Een 64-jarige vrouw is deze ochtend plotseling overleden in het centrum van Paramaribo. Dit gebeurde vanmorgen rond 09.30u aan de Keizerstraat in Suriname.

De redactie van Waterkant.Net verneemt dat de vrouw genaamd Shirley J.L. in een bus zat toen ze ineens onwel werd. Ze raakte bewusteloos waarna de buschauffeur zijn voertuig aan de kant parkeerde en de politie inschakelde.

Nadat een ambulance werd ingeschakeld werd de vrouw in de ziekenwagen geplaatst. Het ambulancepersoneel stelde echter vast dat ze geen teken van leven vertoonde. Een arts werd ingeschakeld en stelde de dood vast.

Home > Onderwerpen > Justitie en politie > Bewusteloos geraakte man dood binnengebracht bij SEH

Onderwerpen Justitie en politie Nieuws uit Suriname Uitgelicht

Bewusteloos geraakte man dood binnengebracht bij SEH

7 juli 2022

3



Een 54-jarige man, die woensdagmorgen bewusteloos neerviel aan de Tesimistraat in Suriname, is kort daarna dood binnengebracht bij de Spoedeisende Hulp (SEH).

Op die bewuste morgen viel de man genaamd Hazratoli Hausil bewusteloos neer aan bovengenoemde straat te Kasabaholo. De ingeschakelde politie van Uitvlugt, die ter plaatse ging voor onderzoek, trof betrokkene aan.

Hij kwam weer bij, maar weigerde met de ambulance afgevoerd te worden en ging daarbij te keer. Plotseling verkeerde de man in ademnood en werd hij toch met de ambulance vervoerd. Onderweg naar de SEH gaf hij de geest.

Home > Onderwerpen > Justitie en politie > 31-jarige man valt plotseling dood neer: lichaam in beslag genomen

Onderwerpen Justitie en politie Nieuws uit Suriname Uitgelicht

31-jarige man valt plotseling dood neer: lichaam in beslag genomen

27 juli 2022

1



Een 31-jarige man is dinsdagavond plotseling overleden in een woning aan de Dr. Redmondstraat in Suriname. Vernomen wordt, dat hij samen met een paar vrienden zat te borrelen.

Op een gegeven moment stond hij op en liep naar een bank om te gaan liggen. Iets later trof men hem roerloos op de grond op balkon aan. Hij vertoonde geen tekenen van leven meer.

De politie van Centrum werd ingeschakeld, die op haar beurt een arts ingeschakelde om de dood officieel vast te stellen. De arts twijfelde over de doodsoorzaak.

Home > Onderwerpen > Justitie en politie > Man overleden in DNV-gebouw

Onderwerpen Justitie en politie Nieuws uit Suriname Uitgelicht

Man overleden in DNV-gebouw

26 juli 2022

0



Een 56-jarige man is hedenmorgen overleden in het gebouw van het Directoraat Nationale Veiligheid aan de Grote Combéweg in Suriname.

Vernomen wordt, dat de overledene een supervisor was bij een security bedrijf. Hij reed vanmorgen over de Grote Combéweg, toen hij zich plotseling niet goed voelde. De man parkeerde zijn voertuig aan de kant en vroeg aan één van de medewerkers van het Directoraat Nationale Veiligheid om hulp.

Een DNV-er bracht het slachtoffer naar het gebouw en vervolgens naar het toilet in het gebouw van het DNV. Nadat de medewerker niets meer hoorde stelde hij een onderzoek. Het bleek dat de man in het toilet was gevallen en geen teken van leven meer vertoonde.



Open Legal
Advocaten

MYOCARDITIS NA VACCINATIE? MELD U AAN OM DE SCHADE TE VERHALEN

Open Legal Advocaten wil namens vaccinatieslachtoffers de overheid aansprakelijk stellen voor de schadelijke gevolgen van de COVID-19 vaccinatie. Via deze weg kan de geleden schade geclaimd worden en stopt mogelijk het vaccinatiebeleid.

Om die reden zijn wij op zoek naar:

- o gevaccineerde personen in de leeftijdscategorie 5 t/m 30 jaar die
- o zijn ingeënt met het vaccin van Pfizer
- o vervolgens hartklachten (Myocarditis) ervaren en
- o samen met medeslachtoffers hun schade willen claimen.

Vanwege beschikbare financiering zijn geen deelnamekosten verbonden aan deze procedure. De verwachte tijdsinvestering is bovendien minimaal.

INTERESSE?

Mail in dat geval aub. uiterlijk maandag 27 juni a.s. uw contactgegevens naar info@openlegal.nl o.v.v. 'deelname vaccinatieprocedure'.

Wij nemen dan spoedig contact met u op. Uiteraard gaan wij discreet om met uw gegevens.

OPENLEGAL.NL

FARMING

Food supply facing continued attacks

PAGE 3



NEWS

Microplastics from masks found in lungs

PAGE 11



EDUCATION

Schools ruining children's minds

PAGE 27



HEALTH

3G radiation: What you need to know

PAGE 28

THE IRISH LIGHT

Issue 11

People-Funded Paper

FREE

The Government is coming for your home
John Waters on why we must resist the attack on property rights, p10

Heart disease in children explodes since vaccine

Sudden deaths of children soar as media stay silent

THE greatest crime ever committed by an Irish government - and there have been many - will not be revealed from the Irish people which hunger. As hard as PSE tries to cover up the growing impact of the covid virus on Irish children, there is one thing that is undeniable: the staggering sudden deaths in young children.

It is also been a sharp rise in sudden and severe hepatitis (which has been seen in at least 10 countries including Ireland) in so many healthy children that all know the answer but not have the courage to say so.

Because they know they are the ones responsible for the same fate. Pathologist Dr Peter Keegan recently about the deaths of children who died after the vaccine. He says psychosis that has since the advent of these people state where they are in the death of a child has been caused by cognitive

dissemination and detail often witnessed in parents whose perfectly healthy toddler becomes violently autistic in the aftermath of the MMR vaccine. They know what changed their child overnight but cannot state it publicly because they are the ones responsible. And to it with the covid vaccine.

How many children whose lives have been wiped out were urged to take it by their reckless parents? They will have to live with that for the rest of their lives. If only they knew the peace and strength they would feel if they could find the courage to speak out and save other young lives. At least their child's

death would not have been in vain. But even the dim of silence will burst because the injury levels are too alarming to ignore. In the US, the number of injuries and deaths recorded in the government database of Vaccine Adverse Events Reporting System (VAERS) following

Pfizer released a document listing over 9 pages of over 1200 adverse events of special interest.



covid vaccines has soared above 1.2 million cases.

This represents an increase of 3000% compared to the previous 30 years of vaccine usage.

In the world of sport, there has been at least 930 post-vaccine heart attacks and more than 620 deaths.

As of March 24, 2022, VAERS had received 2,323 reports of heart inflammation among people ages 30 years and younger who received the vaccine.

Youngsters involved in the GAA - which took a draconian approach to vaccination - have been dying at a terrifying rate.

RTE and the rest of the mainstream media, which could not exist without Big Pharma/ISE funding, should be interrogating the sporting organisation as to why so many of its young members are dropping dead. But instead they close ranks refusing to

even acknowledge the sheer numbers who are dying and try to normalise sudden death, heart disease and strokes in children or cynically imply that the child committed suicide.

It is a crime which will seal their demise when the public finally learn the truth about how they were duped into taking this lethal experimental drug.

Even the manufacturers admit in the small print that their vaccines have side effects.

Pfizer released a document listing over 9 pages of over 1200 adverse events of special interest.

Continued on page 2 >>>

Zeer zeldzaam

Lareb: 373 meldingen van hartontstekingen na coronavaccins

02 mei 2022 15:39



De bijwerkingen kwamen vooral voor bij mannen jonger dan 40.

Bijwerkingencentrum Lareb heeft tot eind januari 373 meldingen ontvangen van een ontsteking van de hartspier (myocarditis) of het hartzakje (pericarditis) na coronavaccinatie. Dat zijn er 142 meer dan bij de vorige rapportage eind november vorig jaar.

In Nederland zijn meer dan 30 miljoen vaccins gezet bij ruim 12 miljoen mensen. De meeste bijwerkingen zijn zeldzaam, en Lareb wijst erop dat de hartontstekingen 'bekende zeldzame bijwerkingen' zijn van de vaccins van Pfizer/BioNTech en Moderna.

Myocarditis kwam vooral voor bij mannen jonger dan 40 jaar. Ook pericarditis is vooral gemeld bij mannen. Het ging hierbij ook om ouderen.



Lees ook:

In jaar tijd 36 nieuwe bijwerkingen coronavaccins ontdekt: 'Hier blijft het wel bij'

(<https://www.rtlnieuws.nl/nieuws/artikel/5266027/vaccins-corona-covid-19-bijwerkingen>).

Volgens het centrum zijn er drie mensen overleden aan hartproblemen na myocarditis of pericarditis, na vaccinatie met Pfizer/BioNTech. "In deze meldingen kunnen ook infecties of andere hartaandoeningen een rol hebben gespeeld. Dat myocarditis of pericarditis na vaccinatie optreedt, betekent niet dat het vaccin altijd de oorzaak is", benadrukt Lareb.

Drie mensen overleden

Twee mensen overleden na een hartontsteking na een prik met het Janssen-vaccin en één na inenting met AstraZeneca. "Van deze vaccins zijn dit geen bekende bijwerkingen", zegt het bijwerkingencentrum.

Van het totale aantal meldingen gaat het in 274 van de gevallen om pericarditis en 99 keer om myocarditis. Lareb geeft daarbij aan dat uit onderzoeken blijkt dat het risico op myocarditis en pericarditis door Covid groter is dan door de coronavaccins.



Lees ook:

Wat is het verschil tussen gewone trombose en trombose door een coronavaccin?

(<https://www.rtlnieuws.nl/nieuws/nederland/artikel/5226215/corona-update-coronavaccin-covid-19-trombose-astrazeneca-janssen>).

"Artsen en mensen die gevaccineerd zijn, moeten goed letten op klachten zoals kortademigheid, pijn op de borst en onregelmatige hartslag, die kunnen wijzen op myocarditis of pericarditis. Wie deze klachten heeft, moet contact opnemen met een arts. De klachten gaan meestal vanzelf over of zijn met medicijnen goed te behandelen", zegt de organisatie.

Trombosegevallen

Lareb ontving verder 2080 meldingen van trombose en embolieën, een bloedprop in een bloedvat, na coronavaccinaties. Trombose en longembolie komen ook los van vaccinatie voor, onderstreept het centrum. Lareb is in samenwerking met het Leids Universitair Medisch Centrum (LUMC) een vervolgonderzoek gestart naar het risico op trombose na coronavaccinatie.

Ook maakte Lareb bekend dat er tot dusver 683 meldingen zijn gedaan van overlijden na een coronaprik. Dat betekent volgens het centrum niet dat een bijwerking van het vaccin de oorzaak is van het overlijden.

Bekijk ook: Waarom het (nog) niet lukt de hele wereld tegen corona te vaccineren



June 3, 2022
6:13 PM UTC
Last Updated a day ago

Future of Health

U.S. FDA flags risk of heart inflammation after Novavax COVID vaccine

By Manas Mishra and Mrinalika Roy



3 minute read



1/2 A vial labelled "Novavax COVID-19 Vaccine" is seen in this illustration taken January 16, 2022. REUTERS/Dado Ruvic/Illustration

Register now for FREE unlimited access to Reuters.com

June 3 (Reuters) - The U.S. Food and Drug Administration has raised concerns about a possible risk of heart inflammation from Novavax Inc's (NVAX.O) COVID-19 vaccine, even as the company's data showed it could reduce the chances of mild-to-severe disease.

Register

In Novavax's nearly 30,000 patient trial, conducted

... involved nearly 50,000 patients who, between December 2020 and September 2021, there were four cases of a type of heart inflammation called myocarditis detected within 20 days of taking the protein-based shot.

"These events raise the concern for a causal association with this vaccine, similar to the association documented with mRNA COVID-19 vaccines," FDA staff wrote in briefing documents released on Friday.

Shares of the company fell nearly 14% after the FDA's analysis of data from the company's trial.

The agency said it had requested Novavax to flag myocarditis and another kind of heart inflammation called pericarditis as an "important identified risk" in its materials. The company has not yet agreed to do so.

Novavax, in response to the safety concerns flagged by the FDA, said natural background events of myocarditis can be expected in any sufficiently large database.

"Based on our interpretation of all the clinical data supporting NVX-CoV2373 ... we believe there is insufficient evidence to establish a causal relationship," the company said in a statement.

One patient in the trial reported myocarditis after receiving placebo.

Novavax has said the shot, NVX-CoV2373, will play a role in driving vaccination among those who have been hesitant to get immunized and it has started an educational effort on vaccine choices.

"Despite the wide availability of authorized or approved vaccines, the SARS-CoV-2 pandemic is not well controlled in the U.S. ... there remains a desire for vaccines that have been developed using well-understood technology platforms," it said.

The FDA analyzed data from Novavax's trial before

the Omicron and Delta variant became the dominant strains.

"Based on the efficacy estimate in the clinical trial of this vaccine, it is more likely than not that the vaccine will provide some meaningful level of protection against COVID-19 due to Omicron, in particular against more severe disease," the FDA staff said.

The vaccine showed an efficacy of 90.4% in Novavax's study, which enrolled adults across the United States and Mexico.

The FDA's comments came in a briefing note initially prepared ahead of a May 7 meeting of the agency's outside advisers.

Its staff comments will be used by those advisers to guide their decision on whether or not to recommend authorizing the vaccine on Tuesday. The FDA is not mandated to follow the advise of its outside experts, but usually does.

Register now
for FREE
unlimited
access to
Reuters.com

Register

Reporting by Manas Mishra and Mrinalika Roy in Bengaluru, and Michael Erman in New Jersey; Editing by Saumyadeb Chakrabarty, David Holmes and Devika Syamnath

Our Standards: [The Thomson Reuters Trust Principles.](#)

More from Reuters

Future of Health



Sustainable Switch

Subscribe to our sustainability newsletter to make sense of the latest ESG trends affecting companies and governments.

Sign up



Daily Briefing

Subscribe to our newsletter to get all the news you need to start your day.

Sign up



Families open up about terrifying condition claiming lives of healthy young people

Catherine Keane was a healthy 31-year-old when she died unexpectedly in her sleep of a terrifying condition affecting young adults.

Rhiannon Lewin / [Public Health](#) / Updated 10 days ago



The family of a young Irish woman who died suddenly in her sleep are sharing their devastation and warning others of a [terrifying condition](#) affecting young adults.

Catherine Keane was a healthy 31-year-old when she died unexpectedly in her sleep last July, from a condition known as Sudden Adult Death Syndrome, or Sudden Arrhythmic Death Syndrome (SADS).

The condition is an "umbrella term to describe unexpected deaths in young people", usually under 40, when a post-mortem can find no obvious cause of death, according to the [Royal Australian College of General Practitioners](#) (RACGP).

Watch the latest News on Channel 7 or stream for free on [7plus >>](#)

While it's unknown how many people die of the condition globally every year, a Victorian register rolled out two years ago suggests it kills about 750 young people in that state annually.

UP NEXT

1:56	0:46	0:23	0:21	0:26
New treatment to protect children receiving	Hailey Bieber gives update on husband Justin Bieber's health	Little girl, two, recovers after puppies maul her	Tissues in short supply during brutal flu season	23-year-old emotional endometri

Uni student dies 13 days after receiving devastating diagnosis

[Melbourne](#)'s Baker Heart and Diabetes Institute hopes to extend the register nationwide.

Meanwhile, Catherine's family members are sharing their story in the hopes others will get screened for SADS if there is a family history of cardiac illness.

Catherine's mother, Margherita Cummins, said her daughter was found by her flatmates last year in Dublin.

"She was living with two friends in Rathmines in Dublin, and they were all working from home, so no one really paid attention when she didn't come down for breakfast," she told the [Irish Mirror](#).

"They sent her a text at 11.20am and when she didn't reply, they checked her room and found she had passed. Her friend heard a noise in her room at 3.56am and believes now that is when she died."

ADVERTISEMENT



Catherine died suddenly in her sleep at 31 years of age. Credit: Facebook

Cummins added that Catherine was doing well at her job and was very healthy leading up to her death.

"She worked for an advertising company and was doing really well. She went to the gym and walked 10,000 steps every day," she said.

Cummins then went on to share her struggle, and said there were so many reminders of her daughter every day.

"I try and look at something positive to get me through, but there are so many reminders everywhere," she said.

"I take some comfort in that she went in her sleep and knew no pain, and I'm grateful for that. I always worried about the kids driving in the car but never saw this coming. I never thought I'd ever lose a child in my life."

Another family have also opened up about their heartache after their 19-year-old son died from SADS in April last year.

Liam, who is described as having been a "vibrant, fit and healthy young man", died from the condition suddenly, leaving his family devastated.

"Nothing could have prepared us for what happened on that day of April 2 or what potentially lay ahead of us," his mother Adele Doherty wrote on a [fundraising page](#).

"This became our journey into a lot of uncharted waters, learning the depths of SADS, trying to understand and process it all."

Early prevention an 'important step'

While national figures are not available, Melbourne's Baker Heart and Diabetes Institute has a Victorian registry of figures, which they hope to make national.

Dr Elizabeth Paratz, cardiologist and researcher at the Institute, told 7NEWS.com.au the figures had remained consistent over the years.

"In our registry, there are approximately 750 cases per year of people aged under 50 in Victoria suddenly having their heart stop," she said.

"Of these, approximately 100 young people per year will have no cause found even after extensive investigations such as a full autopsy."

Paratz explained that the numbers had remained tragically consistent over the years.

"This has always been a really tragic thing that's been around, and we haven't seen a big change in numbers in recent years," she said.

"It's always been something that affects people in their life with no warning.

"So, if there is any family history, it is a very good idea to get a screening."

The RACGP has guidelines that recommend those who may be at risk to get screened.

It said any first-degree relatives of an individual with a genetic arrhythmogenic disorder are at a 50 per cent higher risk of developing the condition.

The RACGP says the following individuals are at risk:

- Any first-degree relatives with unexplained sudden cardiac death under 40 years of age
- Episodes of unexplained syncope (fainting)
- Syncope or seizures during exercise, excitement or startle.

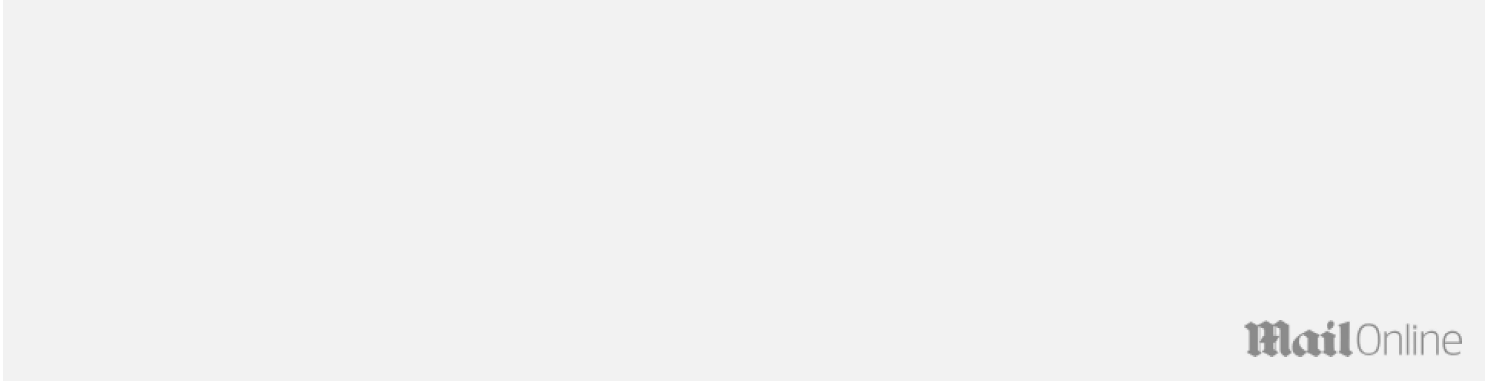
A medically reviewed report on [US site Healthline](#) said most people didn't know they had the syndrome until a cardiac arrest occurred.

"Because SDS is often misdiagnosed or not diagnosed at all, it's unclear how many people have it," the report said.

It said while there was no known cure for the condition, an early diagnosis was an important step in preventing a fatal episode.

Stream Free on 

ADVERTISEMENT



MailOnline

Healthy young people are dying suddenly and unexpectedly from a mysterious syndrome - as doctors seek answers through a new national register

- People aged under the age of 40 being urged to go and get their hearts checked
- May potentially be at risk of having Sudden Adult Death Syndrome (SADS)
- SADS is an 'umbrella term to describe unexpected deaths in young people'
- A 31-year-old woman who died in her sleep last year may have had SADS

By TOM HEATON FOR DAILY MAIL AUSTRALIA

PUBLISHED: 07:05 BST, 8 June 2022 | UPDATED: 07:32 BST, 8 June 2022

Share

65k shares
 137 View comments

People aged under 40 are being urged to have their hearts checked because they may potentially be at risk of Sudden Adult Death Syndrome.

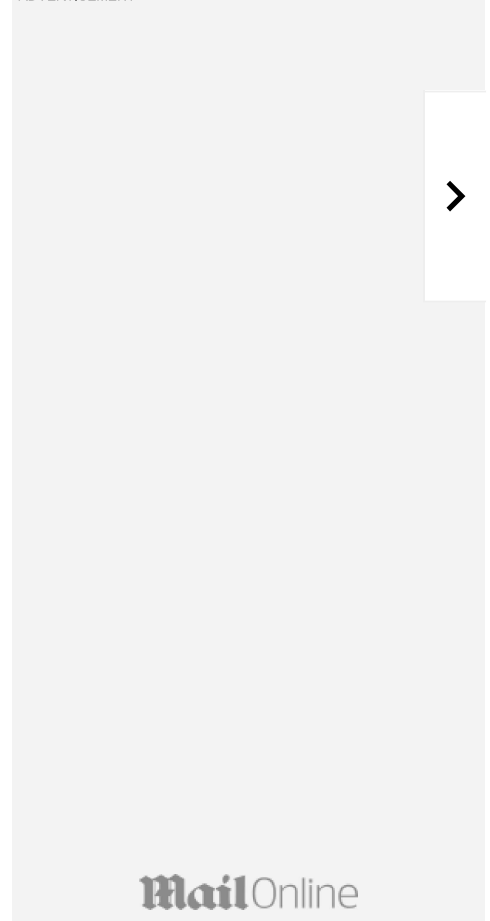
The syndrome, known as SADS, has been fatal for all kinds of people regardless of whether they maintain a fit and healthy lifestyle.



MailOnline

Site Web

ADVERTISEMENT



MailOnline

	Follow Daily Mail		Subscribe Daily Mail
	Follow @DailyMail		Follow Daily Mail
	Follow @dailymailuk		Follow Daily Mail

SADS is an 'umbrella term to describe unexpected deaths in young people', said The Royal Australian College of General Practitioners, most commonly occurring in people under 40 years of age.



People aged under 40 are being urged to have their hearts checked, because they may potentially be at risk of Sudden Adult Death Syndrome (SADS) (pictured, woman experiencing chest pain while running)

The term is used when a post-mortem cannot find an obvious cause of death.

The US-based SADS Foundation has said that over half of the 4,000 annual SADS deaths of children, teens or young adults have one of the top two warning signs present.

Those signs include a family history of a SADS diagnosis or sudden unexplained death of a family member, and fainting or seizure during exercise, or when excited or startled, reported news.com.au.

Last year a 31-year-old woman, Catherine Keane, died in her sleep while living with two friends in Dublin.

DON'T MISS

▶ Irish TV presenter Aileen Kennedy dies aged 43: Popular UTV host loses battle with terminal illness after receiving 12 blood transfusions



▶ Victoria Beckham praises 'the best, most loving' husband David and 'favourite drinking partner' dad Tony as she leads the celebrity Father's Day tributes



▶ 'You only live once... and when you do it right once is enough': Bake Off winner Peter Sawkins announces same-sex relationship during Pride Month



▶ Khloe Kardashian shares awkward hug with cheating ex Tristan Thompson as they grab lunch with daughter True and her mother Kris Jenner in LA



▶ Olly Murs and new fiancée Amelia Tank step out to walk their dog in first appearance since engagement news
The singer recently proposed



▶ Eat Well, Play Well!
The UK's biggest footballing heroes have joined forces with M&S Food to help the nation's kids to eat better - here's how!
AD FEATURE



▶ Pregnant Billie Faiers displays her growing bump in a summery co-ord as she is joined by sister Sam Faiers and her newborn son Edward at Asda event



▶ Laughter that shows Prince William will be having a VERY happy Father's Day just days before he turns 40



▶ Ioan Gruffudd, 48, attends Monte Carlo TV Festival after jetting out of LA with Bianca Wallace, 29... while ex wife Alice Evans claims to have no money



▶ TV gardener Daisy Payne shows one family how easy it is to bring wildlife into their garden (and you can too!)
AD FEATURE





© Margherita Cummins/Facebook

+4
View gallery

Catherine Keane (pictured right with her mother Margherita), 31, was found to have died in her sleep while living with two friends in Dublin last year

Her mother Margherita Cummins told the [Irish Mirror](#), 'They were all working from home so no one really paid attention when Catherine didn't come down for breakfast.'

'They sent her a text at 11.20am and when she didn't reply, they checked her room and found she had passed.'

'Her friend heard a noise in her room at 3.56am and believes now that is when she died.'

Ms Cummins stated that her daughter 'went to the gym and walked 10,000 steps every day'.

'I take some comfort in that she went in her sleep and knew no pain and I'm grateful for that. I always worried about the kids driving in the car but never saw this coming. I never thought I'd ever lose a child in my life.'

▶ Charles shares a poignant photo of himself with William and Harry when they were young to mark Father's Day - alongside a tribute to Prince Philip



ADVERTISEMENT



MailOnline

▶ Sam Fox and Linda Olsen are MARRIED! Singer stuns in a strapless white wedding dress as she arrives at her ceremony under umbrellas in Essex



▶ Jodie Prenger lands 'dream role' in Coronation Street as actress confirms she will play George Shuttleworth's 'fun and sassy' sister Glenda

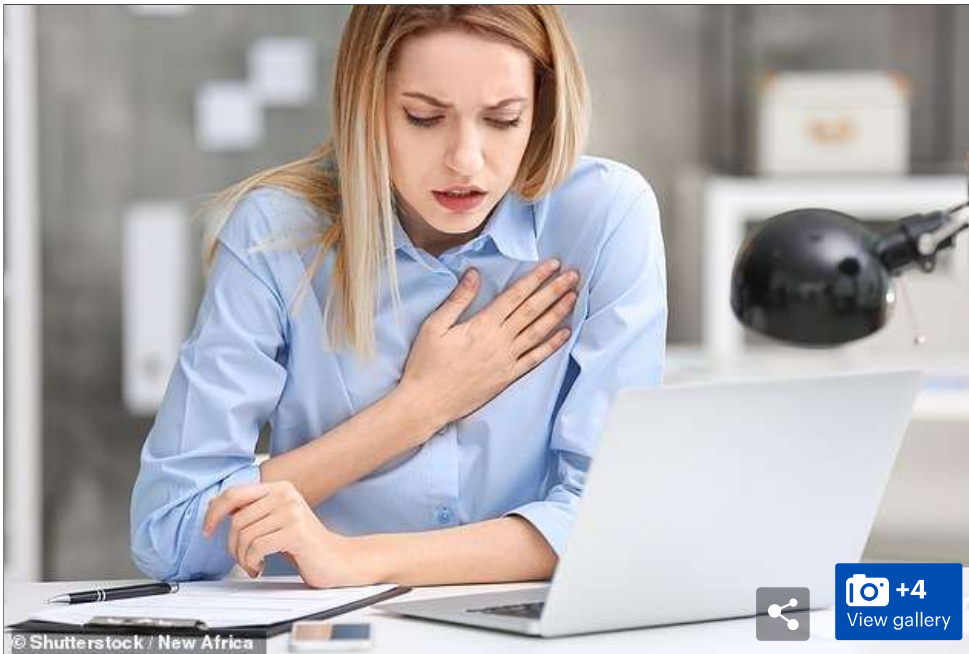


▶ 'Thank you for being the best daddy': Jacqueline Jossa shares a tribute from her children to Dan Osborne as they spoil him on Father's Day



▶ 'Look what happened to me when I came forward. Would you?': Amber Heard suggests Johnny Depp's exes are too scared to publicly accuse him of violence





Spokesperson for Melbourne's Baker Heart and Diabetes Institute said: 'there are approximately 750 cases per year of people aged under 50 in Victoria suddenly having their heart stop (cardiac arrest)' (pictured, woman suffering from chest pain)

Melbourne's Baker Heart and Diabetes Institute is developing the country's first SADS registry.

'There are approximately 750 cases per year of people aged under 50 in Victoria suddenly having their heart stop (cardiac arrest),' a spokesperson said.

'Of these, approximately 100 young people per year will have no cause found even after extensive investigations such as a full autopsy (SADS phenomenon).'

Cardiologist and researcher Dr Elizabeth Paratz said: 'Baker's registry was the first in the country and one of only a few in the world that combined ambulance, hospital and forensics information.'

'(It allows you to see) people have had the cardiac arrest and no cause was found on the back end,' Dr Paratz said.

She believes the potential lack of awareness may be due to the fact 'a lot of it takes place outside of traditional medical settings'.

▶ Kate Moss, 48, can't shrug off a lifetime of smoking as she's seen puffing on a cigarette during outing with her daughter Lila Grace



▶ Alan Carr, Oti Mabuse, athlete Denise Lewis and Olympic sprinter Iwan Thomas among stars to share support for Dame Kelly Holmes, 52, as she comes out



▶ Buckingham Palace 'BURIES' report on Meghan's 'bullying': Inquiry into allegations the Duchess bullied staff before Megxit 'will never be published'



▶ Catherine Tyldesley is unrecognisable in a brown bob wig and baggy pyjamas as she transforms into elderly Olga Smith while filming mystery project



▶ 'Having a bit of a rough moment': Alice Evans claims to have no money for food or bills amid explosive split from Ioan Gruffudd and court case



▶ Girls gone WILD... Logies edition! The Masked Singer judges Mel B and Abbie Chatfield get flirty on the red carpet as they arrive for Aussie event



ADVERTISEMENT



© Baker Heart and Diabetes Institute

Cardiologist and researcher Dr Elizabeth Paratz (pictured) said from a public health perspective, combating SADS was 'not as easy as everyone in Australia getting genetically screened' as scientists were still not 100 per cent clear on 'what genes cause this'

'The majority of these SADS events, 90 per cent, occur outside the hospital – the person doesn't make it – so it's actually ambulance staff and forensics caring for the bulk of these patients,' Dr Paratz said.

'I think even doctors underestimate it. We only see the 10 per cent who survive and make it to hospital. We only see the tip of the iceberg ourselves.'

For family and friends of victims, SADS is a 'very hard entity to grasp' because it's a 'diagnosis of nothing', Dr Paratz added.

SHARE THIS ARTICLE



RELATED ARTICLES



'Perfectly healthy' student has seizure after inhaling a...



Man dies in packed emergency room as health system buckles...

Dr Paratz said that from a public health perspective, combating SADS was 'not as easy as everyone in Australia getting genetically screened' as scientists were still not 100 per cent clear on 'what genes cause this'.

'The best advice would be, if you yourself have had a first-degree relative – a parent, sibling, child – who's had an unexplained death, it's extremely recommended you see a cardiologist,' she said.

Read more:

www.news.com.au/

Irish Mirror: the latest news, showbiz, football and sport

▶ **Perrie Edwards and Alex Oxlade-Chamberlain are ENGAGED!** Little Mix star announces the 'love of her life' got down on one knee



▶ **Denise Van Outen wows in a black bodysuit and a funky hat as she takes to the stage at Isle Of Wight Festival... after split from Eddie Boxshall**



▶ **Jennifer Lopez performs duet and introduces child Emme using they/them pronouns: 'They're my favorite duet partner of all time'**



▶ **Cameron Diaz cuts a casual figure while husband Benji Madden carries daughter Raddix, two, in his arms as they make their way through JFK airport**



▶ **Worried about the rising cost of living? Use our calculator to see if changes in National Insurance could help save YOU money**



▶ **High street royals! The wallet-friendly wardrobe donned by Prince George, Princess Charlotte and Prince Louis for Father's Day photo**



▶ **How Kylie Minogue was rejected and forgotten about until one fateful night changed EVERYTHING and put her on the road to worldwide fame**



▶ **'I am more in love with you now than ever': Bryce Dallas Howard pays tribute to husband Seth Gabel as they celebrate their 16th wedding anniversary**



▶ **Charlize Theron puts on a leggy display in black hot pants before changing into a grey three-piece suit while filming The Old Guard 2 in Rome**



The Logies are back!
Chrissie Swan, Anna

ZOEK

[OPINIE](#) [BIZAR](#) [GELD](#) [ETEN](#) [TECH](#) [DRIVE](#) [WONEN](#) [REIZEN](#) [WETENSCHAP & PLANEET](#)


Het vaccin van Johnson & Johnson . © AFP

Medicijnwaakhond VS legt coronavaccin Johnson & Johnson zware restricties op

De Amerikaanse medicijnwaakhond FDA legt het coronavaccin van Johnson & Johnson verregaande restricties op nadat het vaccin gelinkt werd aan een risico op

NET BINNEN

12:01 [Hoe komt het dat we soms een 'brainfreeze' ervaren als we ijs eten?](#)

18-06 [Minder papierwerk voor huisartsen](#)

17-06 [HILN+ Wat gebeurt er met ons lichaam in de hitte? En wat doe je best om problemen te vermijden?](#)

17-06 [Amerikaanse toezichthouder FDA keurt coronavaccins voor baby's goed](#)

17-06 [Speurhonden kunnen ook langdurige Covid-19-patiënten herkennen](#)

[ALLE BERICHTEN](#)

WETENSCHAP & PLANEET

» [Wetenschap](#)

» [Weernieuws](#)

» [Dieren](#)

» [Milieu](#)

» [Medisch](#)

MEEST GELEZEN

[Boostervaccin van Sanofi en GSK](#)

ernstige trombose (bloedstolsels). Dat heeft het FDA donderdag meegedeeld.

IB 06-05-22, 04:19 Laatste update: 06-05-22, 05:04 Bron: BELGA



Concreet mag het vaccin van Johnson & Johnson voortaan enkel nog toegediend worden aan volwassenen als een prik met Pfizer of Moderna om medische redenen of wegens stockproblemen niet mogelijk is. Daarnaast wordt ook nog een opening gemaakt voor mensen die wegens "persoonlijke twijfels" geen mRNA-vaccin wensen.

Het FDA nam de beslissing nadat het zestig gevallen van tromboses onder de loep had genomen, waarvan negen overlijdens.

Lees ook



"Janssen tijdelijk gestopt met productie coronavaccin"



Johnson & Johnson-vaccin minstens zo effectief als Moderna en Pfizer: "Hadden..."

In de VS werden iets minder dan 19 miljoen doses van het coronavaccin van Johnson & Johnson toegediend, goed voor zowat 3 procent van het totale aantal doses.



levert sterke immuunrespons op

1



Oorzaak ernstige Covid-infectie bij kinderen is soms erfelijke fout in immuunsysteem

2



"Minder kans op langdurige Covid door omikron"

3



Speurhonden kunnen ook langdurige Covid-19-patiënten herkennen

4



Amerikaanse gezondheidsautoriteit FDA keurt eerste pil tegen alopecia goed: "Bij 45 procent van de..."

5

MEEST GEDEELD



Amerikaanse experts positief over inenting baby's tegen coronavirus



Amerikaanse gezondheidsautoriteit FDA keurt eerste pil tegen alopecia goed: "Bij 45 procent van de..."



WHO roept op tot hervorming mentale gezondheidszorg wegens toenemende vraag



Studie toont hoe simpele oogtest risico op hartaanvallen kan voorspellen

PRODUKTIE 14

NEWS AND COMMENTARY

Judge Orders FDA To Expedite Release Of Pfizer Data On COVID-19 Vaccine: 'Paramount Public Importance'

By **Tim Pearce**

Jan 7, 2022 DailyWire.com



Jakub Porzycki/NurPhoto via Getty Images

A federal judge in Texas ordered the Food and Drug Administration (FDA) to expedite the release of hundreds of thousands of pages of documents on the Pfizer vaccine, rejecting a request by the federal government to tranche out the data over the next 75 years.

U.S. District Judge Mark Pittman of the U.S. District Court for the Northern District of Texas ruled on Thursday that the FDA must release all data submitted by Pfizer for its application for its COVID-19 vaccine's emergency use at a pace of 55,000 pages a month. The FDA had requested that it be allowed to put out the data at a far lower pace of 500 pages per month.



Pittman's ruling comes as a result of a Freedom of Information Act (FOIA) Request filed by Public Health and Medical Professionals for Transparency, a group formed to make public the data used by the FDA to grant emergency approvals for COVID-19 vaccines. Attorney Aaron Siri, who represented the group in court over the FOIA request, celebrated the ruling in a piece on Substack.

"This is a great win for transparency and removes one of the strangleholds federal 'health' authorities have had on the data needed for independent scientists to offer solutions and address serious issues with the current vaccine program – issues which include waning immunity,

variants evading vaccine immunity, and, as the CDC has confirmed, that the vaccines do not prevent transmission,” Siri wrote.

“No person should ever be coerced to engage in an unwanted medical procedure,” he continued. “And while it is bad enough the government violated this basic liberty right by mandating the Covid-19 vaccine, the government also wanted to hide the data by waiting to fully produce what it relied upon to license this product until almost every American alive today is dead. That form of governance is destructive to liberty and antithetical to the openness required in a democratic society.”

Pittman’s ruling states that the FDA must turn over 12,000 pages of documents by the end of January, then 55,000 pages every 30 days until the entirety, omitting redacted portions, of the data submitted by Pfizer has been released. The judge rejected the FDA’s request for a slower release schedule citing the “paramount public importance” of the vaccine data. Pittman wrote in part:

Here, the Court recognizes the “unduly burdensome” challenges that this FOIA request may present to the FDA. See generally ECF Nos. 23, 30,

34. But, as expressed at the scheduling conference, there may not be a “more important issue at the Food and Drug Administration . . . than the pandemic, the Pfizer vaccine, getting every American vaccinated, [and] making sure that the American public is assured that this was not [] rush[ed] on behalf of the United States” ECF No. 34 at 46.

Accordingly, the Court concludes that this FOIA request is of paramount public importance.

“[S]tale information is of little value.” *Payne Enters., Inc. v. United States*, 837 F.2d 486, 494 (D.C. Cir. 1988). The Court, agreeing with this truism, therefore concludes that the expeditious completion of Plaintiff’s request is not only practicable, but necessary. See *Bloomberg, L.P. v. FDA*, 500 F. Supp. 2d 371, 378 (S.D.N.Y. Aug. 15, 2007) (“[I]t is the compelling need for such public understanding that drives the urgency of the request.”). To that end, the Court further concludes that the production rate, as detailed below, appropriately balances the need for unprecedented urgency in processing this request with the FDA’s concerns regarding the burdens of production. See *Halpern v. FBI*, 181 F.3d 279, 284–85 (2nd Cir. 1991) (“[FOIA] emphasizes a preference for the fullest possible agency disclosure of such information consistent with a responsible balancing of competing concerns”).



**THE FIVE REASONS
I WENT FROM
PRO-CHOICE TO PRO-LIFE**
BY: CANDACE OWENS

READ HERE

DW

[COVID-19 vaccine](#), [FDA](#), [Pfizer](#)



Health Law & Business

Why a Judge Ordered FDA to Release Covid-19 Vaccine Data Pronto

By Aaron Siri

Jan. 18, 2022, 6:00 AM

A group of scientists and medical researchers sued the FDA under FOIA to force release of hundreds of thousands of documents related to licensing of the Pfizer-BioNTech Covid-19 vaccine. Plaintiff's attorney Aaron Siri, who is representing the group, explains the fight that led a federal court to order expedited release of documents the agency claimed it would take decades to process.

In response to a Freedom of Information Act request, the Food and Drug Administration asked a federal judge for permission to make the public wait until the year 2096 to disclose all of the data it relied upon to license Pfizer's Covid-19 vaccine.

That is not a typo. The FDA wanted court approval to have up to 75 years to publicly disclose this information.

In its attempts to build public support for Covid-19 vaccinations, the FDA repeatedly promised "full transparency," and reaffirmed its "commitment to transparency" when licensing Pfizer's Covid-19 vaccine.

With that promise in mind, after the vaccine's licensure in August 2020, Public Health and Medical Professionals for Transparency, a group of highly credentialed scientists submitted a FOIA request to the FDA for the data submitted by Pfizer. The scientists explained that, until all the data is produced, a proper review cannot be conducted because missing even a single data set could throw off any analysis.

In response, the FDA produced nothing. Therefore, in September 2021, the scientists, represented by their attorneys at Siri & Glimstad, sued the FDA demanding it produce this data by March 2022.

The agency originally estimated it would need to produce 329,000 pages, and asked the court for permission to produce just 500 pages per month, which would have taken 55 years. In its final brief to the Court, the FDA admitted that the total page count was at least 451,000, but still sought permission to produce just 500 pages per month. Meaning that it could have taken 75 years, when most Americans alive today would be dead, to fully publicly disclose this information.

On Jan. 6, a federal court in the Northern District of Texas ordered the expedited release. As of Jan. 12, the FDA hasn't indicated it intends to appeal.

Scientists Requested Data After FDA Licensing

The FDA licensed the Pfizer vaccine on Aug. 23, 2021, just 108 days after Pfizer started producing the records to the agency. During that period, the FDA asserts it conducted an intense, robust, and thorough analysis of those documents to assure the public that the Pfizer vaccine was safe and effective.

Yet, when asked to share those documents with the public, the FDA claimed it needed over 20,000 days. The FDA's production schedule clashed with its promise of transparency.

The purpose of FOIA is government transparency. When it comes to the Pfizer vaccine, the need for transparency is unprecedented. A majority of Americans are now mandated to receive a Covid-19 vaccine under penalty of losing a job, or worse.

This has never been done before. Typically adult vaccine mandates have been limited; even the seminal U.S. Supreme Court vaccine mandate decision, *Jacobson v. Massachusetts*, only involved a state-imposed \$5 penalty, and school vaccine mandates have historically had liberal religious or personal belief exemption policies.

Even more problematic is that Americans, if injured, cannot sue Pfizer. There is virtually no other product where a consumer is prohibited from suing the company that manufactures, markets, and profits from the product.

Decoupling a company's profit interest from its interest in safety creates a moral hazard and departs from centuries of product liability doctrine. Thus, it is extraordinary that Americans must take this product under penalty of expulsion from work, school, the military and civil life, but they cannot sue Pfizer for any resulting injuries.

The federal government created this unprecedented situation. It granted the immunity, licensed the product, and aggressively sought mandates. This situation therefore warrants unprecedented transparency.

As then-presidential candidate Joe Biden told the American people, "You've got to make all of it [the vaccine data] available to other experts across the nation so they can look and see." He repeated that need to share the data numerous times. So did senators and representatives on both sides of the aisle.

FDA Claimed It Can't Comply, Judge Orders Compliance

The FDA apparently disagreed. During a hearing on Dec. 14, 2021, its counsel steadfastly maintained that the court should not require the agency to produce more than 500 pages per month, harping on the FDA's purported limited resources, its need to redact personal information, and duty to protect Pfizer's trade secret interests, all the while ignoring the interests of the American people.

The FDA's excuses were incredible. The FDA has more than 18,000 employees and a budget of over \$6.5 billion. It would be laughable if any multibillion-dollar company came before a court and claimed poverty to escape making a document production, but that was the FDA's position.

U.S. District Judge Mark T. Pittman, Northern District of Texas, expressed dismay at the FDA's proposed rate of production. He found the duration requested by the FDA unreasonable, comparing it to the actions of totalitarian nations. As such, the judge on Jan. 6 ordered the FDA to produce at least 55,000 pages per month.

In his ruling, the judge recognized that the release of this data is of paramount public importance and should be one of the FDA's highest priorities. He quoted James Madison as saying a "popular Government, without popular information, or the means of acquiring it, is but a Prologue to a Farce or a Tragedy" and John F. Kennedy as explaining that a "nation that is afraid to let its people judge the truth and falsehood in an open market is a nation that is afraid of its people."

America has some of the greatest institutions of learning the world has ever known. We need the scientific community, both inside and outside the government, to address the serious ongoing issues with the vaccine program, including waning immunity, variants evading vaccines, and that vaccinated individuals can still transmit the virus.

The FDA's attempt to close the door and lock out independent scientists from the data necessary to address these issues was irresponsible.

Transparent, Independent Review Is Needed

The failure of the government's closed-door approach is exemplified by the fact that the FDA did not send a representative to the court hearing because, as the government attorney explained, the FDA's Covid-19 protocols would not permit it.

Meaning, despite a reported vaccination rate of over 96% across federal health agencies back in November 2021, and the FDA's claim that the vaccines are "effective," Covid-19 is still disrupting everyday life. This brings into stark focus the need to open the door and involve independent scientists.

As Pittman recognized, America needs transparency and independent scientists to review this data—not in 75 years, but now.

This article does not necessarily reflect the opinion of The Bureau of National Affairs, Inc., the publisher of Bloomberg Law and Bloomberg Tax, or its owners.

Write for Us: Author Guidelines

Author Information

Aaron Siri is the managing partner of Siri & Glimstad LLP, and has extensive experience in a wide range of complex civil litigation matters, with a focus on civil rights involving mandated medical procedures, class actions, and high-stakes disputes. Twitter @aaronsirisg.

Topics

freedom of information
vaccines
biologics research
coronavirus

Companies

Pfizer Inc

PRODUKTIE 15

Moment of truth: Pfizer must prove efficacy and safety of its Covid vaccine within 48 hours in Uruguay

The judge made the order as part of a complaint to suspend childhood vaccinations in Uruguay. The extent to which the authorities and Pfizer can provide the required evidence (and whether their failure to do so will have consequences) will become clear on Wednesday.

By **Juan Martinez** - July 4, 2022



RIO DE JANEIRO, BRAZIL – Uruguay **media report** that a Montevideo judge has ordered disclosure of a range of information about Covid vaccines – within 48 hours. Administrative Judge Alejandro Recarey’s order is directed at the government, the Ministry of Health, the state health agency, and pharmaceutical giant Pfizer.

Among other things, detailed information on the vaccine composition and evidence of its safety is required.

Read also: [Check out our coverage on curated alternative narratives](#)

Representatives of all agencies, as well as pharmaceutical giant Pfizer, are due to appear at the hearing at 9 a.m. Wednesday, where the requested information must be presented.

EL GOBIERNO URUGUAYO Y LA FARMACÉUTICA PFIZER DISPONEN DE 48 HORAS PARA PRESENTAR ANTE LA JUSTICIA INFORMACIÓN DETALLADA DE LAS VACUNAS ANTICOVID ADMINISTRADAS EN EL PAÍS, DE ACUERDO CON UN PEDIDO JUDICIAL DIVULGADO EN LAS ÚLTIMAS HORAS. [HTTPS://T.CO/OTDDEKPGPY](https://t.co/OTDDEKPGPY)

– TELENOCHE (@TELENOCHEUY) JULY 4, 2022

The judge made the order as part of a complaint to suspend childhood vaccinations in Uruguay.

According to the decree, the following information is requested:

- The vaccine purchase contracts between the Uruguayan government and Pfizer, as well as information on whether clauses for civil compensation or immunity from punishment for suppliers in the event of possible side effects, are included
- Information on the distribution of the vaccine batches, as well as quality control measures
- Detailed information on the biochemical composition of the vaccine – including whether graphene oxide and nanotechnology components are included
- Information on the mRNA used and evidence that it is harmless
- A statement whether the vaccine or parts of its ingredients are experimental
- Detailed data demonstrating the efficacy and safety of the vaccination, i.e., “the negative or positive impact of the so-called vaccination on the number of infections and deaths diagnosed with Covid from the beginning of the campaign to the present”
- Detailed information on the average age of those who died with Covid-19 diagnosis and information on how many of those deaths were caused solely by the disease
- Information on whether studies are being conducted on the increase in deaths in Uruguay since the vaccination campaign began in March 2021
- Scientific evidence that unvaccinated people pose a risk
- Information on those responsible for and involved in the vaccination campaign and their links to NGOs or (pharmaceutical) companies
- Information on the extent to which alternative therapies against covid-19 have been investigated

**FALLO HISTORICO EN URUGUAY, UN VERDADERO "MARACANAZO JUDICIAL";JUEZ ORDENA AL GOBIERNO MOSTRAR CONTRATO DE LAS VACUNAS Y MÚLTIPLES MEDIDAS INVESTIGATIVAS, COMO POR EJEMPLO, DECLARACIÓN DE AUTORIDADES DE PFIZER. VIDEO EXPLICATIVO DEL FALLO DEL JUEZ RECAREY
[HTTPS://T.CO/35TSE599CP](https://t.co/35TSE599CP)**

– DR. SALLE LORIER (@SALLELORIER) JULY 2, 2022

The extent to which the authorities and Pfizer can provide the required evidence (and whether their failure to do so will have consequences) will become clear on Wednesday.

Juan Martinez

Juan Martinez is a Chilean economist and journalist. He lives in South Florida and specializes in reporting on Latin America.

Patriots Only!



USSA

News

Do not let this happen to our country.

VERITAS LIBERTATI SCUTUM

Slowly, our freedoms are being chipped away with, "We know better..." justification as its hammer and chisel.



Home

Great Reset Reports

Op-Eds

Town Hall

Subscribe

Contact

Store

Please Donate

More...

▲ \$2,255.34 (26.54 / 1.19%) ▲ Tesla, Inc. ▲ \$720.20 (5.26 / 0.74%) ● Twitter, Inc. ▲ \$37.74 (1.45 / 4.00%)



Pfizer Withdraws from Uruguay After Government Demands Company Disclose Contents of Vaccine

Tales from the Conspiratum

Uruguayan judge demands explanations regarding Pfizer's COVID-19 vax

An Uruguayan court has ruled that the national government and the laboratory Pfizer must disclose during a hearing this coming Wednesday the exact components of the COVID-19 vaccine of that brand which is widely used throughout the country.



The Uruguayan government and the pharmaceutical were given 48 hours by Judge Alejandro Recarey to submit detailed information on the anticovid vaccines while dealing with an injunction request to halt vaccination among children aged 5 and over which is nevertheless carried out voluntarily.

As per the court's decision, the Executive and the U.S. laboratory will have to provide documentation on the composition of the vaccines, including the possible presence of "graphene oxide" or "nanotechnological elements," it was reported.

Also requested are data demonstrating the "innocuousness" of "the substance called messenger RNA" and that "the experimental nature" of the vaccines be accredited.

The judge also demanded explanations as to whether studies have been carried out "to explain the notorious increase in deaths due to covid-19 as of March 2021 in relation to the previous year."

Pfizer will also have to address the issue "of adverse effects of the vaccines against the so-called Covid-19. In general, and also in detail in relation to the child population," according to the court document.

Representatives of the Uruguayan Presidency and the Health Ministry as well as from the US pharmaceutical company are to appear at Wednesday's hearing.

The Uruguayan Ministry of Public Health, the State Health Services Administration, and the Presidency have also been required to submit all the information regarding the contract for the purchase of vaccines, where the clauses of civil indemnity or criminal impunity of the suppliers in the event of adverse effects are to be examined.

HOW DO MILLIONAIRES INVEST THEIR MONEY?

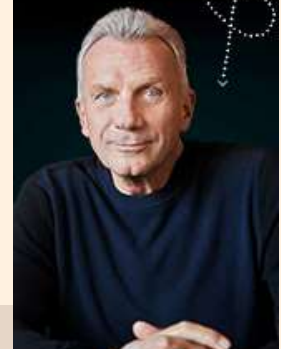
"Get the gold IRA guide. I read it. It's written by a Harvard-trained economist."

DO IT NOW!

Call Today:
(844) 667-0179

- Joe Montana

is a paid ambassador for Augusta



PRODUKTIE 16



37 MINUTES AGO



43 MINUTES AGO



AN HOUR

INDIA

FEBRUARY 5, 2021 / 2:30 AM / UPDATED A YEAR AGO

Pfizer drops India vaccine application after regulator seeks local trial

By Krishna N. Das



NEW DELHI (Reuters) - Pfizer Inc said on Friday it had withdrawn an application for emergency-use authorisation of its COVID-19 vaccine in India, after failing to meet the drug regulator's demand for a local safety and immunogenicity study.



A vial and syringe are seen in front of a displayed Pfizer and Biontech logo in this illustration taken January 11, 2021. REUTERS/Dado Ruvic/Illustration/File Photo

Scientists find an exotic black hole deemed a 'needle in a ...



37 MINUTES AGO

West Virginia judge blocks pre-Roe v. Wade abortion ban

43 MINUTES AGO



Grand j in Geor

AN HO



Unlike other companies conducting small studies in India for foreign-developed vaccines, Pfizer had sought an exception citing approvals it had received elsewhere based on trials done in countries such as the United States and Germany.

Indian health officials say they generally ask for so-called bridging trials to determine if a vaccine is safe and generates an immune response in its citizens. There are, however, provisions under India's rules to waive such trials in certain conditions.

The U.S. company, which was the first drugmaker to seek emergency approval in India for its vaccine developed with Germany's BioNTech, made the withdrawal decision after a meeting with India's Central Drugs Standard Control Organisation (CDSCO) on Wednesday.

The drug regulator said on its website its experts did not recommend the vaccine because of side effects reported abroad were still being investigated. It also said Pfizer had not proposed any plan to generate safety and immunogenicity data in India.

“Based on the deliberations at the meeting and our understanding of additional information that the regulator may need, the company has decided to withdraw its application at this time,” Pfizer said in a statement.

“Pfizer will continue to engage with the authority and re-submit its approval request with additional information as it becomes available in the near future.”

Reuters was the first to break the news.

Pfizer had sought authorisation for its vaccine in India late last year, but the government in January approved two much cheaper shots - one from Oxford University/AstraZeneca and another developed in India by Bharat Biotech with the Indian Council of Medical Research.

PRODUKTIE 17



Innate immune suppression by SARS-CoV-2 mRNA vaccinations: The role of G-quadruplexes, exosomes, and MicroRNAs

Stephanie Seneff^{a,*}, Greg Nigh^b, Anthony M. Kyriakopoulos^c, Peter A. McCullough^d

^a Computer Science and Artificial Intelligence Laboratory, MIT, Cambridge, MA, USA, 02139

^b Immersion Health, Portland, OR, 97214, USA

^c Research and Development, Nasco AD Biotechnology Laboratory, Department of Research and Development, Sachtouri 11, 18536, Piraeus, Greece

^d Truth for Health Foundation, Tucson, AZ, USA

ARTICLE INFO

Handling Editor: Dr. Jose Luis Domingo

Keywords:

SARS-CoV-2 mRNA vaccines
Type I interferon Response
Exosomes
G-quadruplexes
microRNAs
Cancer

ABSTRACT

The mRNA SARS-CoV-2 vaccines were brought to market in response to the public health crises of Covid-19. The utilization of mRNA vaccines in the context of infectious disease has no precedent. The many alterations in the vaccine mRNA hide the mRNA from cellular defenses and promote a longer biological half-life and high production of spike protein. However, the immune response to the vaccine is very different from that to a SARS-CoV-2 infection. In this paper, we present evidence that vaccination induces a profound impairment in type I interferon signaling, which has diverse adverse consequences to human health. Immune cells that have taken up the vaccine nanoparticles release into circulation large numbers of exosomes containing spike protein along with critical microRNAs that induce a signaling response in recipient cells at distant sites. We also identify potential profound disturbances in regulatory control of protein synthesis and cancer surveillance. These disturbances potentially have a causal link to neurodegenerative disease, myocarditis, immune thrombocytopenia, Bell's palsy, liver disease, impaired adaptive immunity, impaired DNA damage response and tumorigenesis. We show evidence from the VAERS database supporting our hypothesis. We believe a comprehensive risk/benefit assessment of the mRNA vaccines questions them as positive contributors to public health.

1. Introduction

Vaccination is an endeavor to utilize non-pathogenic material to mimic the immunological response of a natural infection, thereby conferring immunity in the event of pathogen exposure. This goal has been primarily pursued through the use of both whole organism and attenuated virus vaccines. Use of fragments of virus or their protein products, referred to as "subunit vaccines," has been more technically challenging (Bhurani et al., 2018). In any event, an implicit assumption behind the deployment of any vaccination campaign is that the vaccine confers the effects of a 'benign infection,' activating the immune system against future exposure, while avoiding the health impacts of actual infection.

Much of the literature on this related to COVID-19 suggests that the immune response to mRNA-based vaccination is similar to natural infection. A preprint study found "high immunogenicity of BNT162b2 vaccine in comparison with natural infection." The authors found there

to be many qualitative similarities though quantitative differences (Psychogiou et al., 2021a). Jhaveri (2021) suggests that mRNA vaccines do what infection with the virus does: "The protein is produced and presented in the same way as natural infection." The U.S. Centers for Disease Control and Prevention (CDC) makes the case based upon antibody titers generated by prior infection vs. vaccination, in addition to production of memory B cells, to argue that the immune response to vaccination is analogous to the response to natural infection (Centers for Disease Control and Prevention, 2021a). It is this similarity in the humoral immune response to vaccination vs natural infection, paired with both trial and observational data demonstrating reduced risk of infection following vaccination, that stands as the justification for the mass vaccination campaign.

Our paper summarizes the current literature on mRNA and its effects on the molecular biology within human cells. We recognize that there is a wide range of opinions in this nascent phase of mRNA technology. Given its widespread deployment ahead of basic work on so many of the

* Corresponding author.

E-mail addresses: seneff@csail.mit.edu (S. Seneff), dmnigh@immersionhealthpdx.com (G. Nigh), antkyriak@gmail.com (A.M. Kyriakopoulos), peteramccullough@gmail.com (P.A. McCullough).

<https://doi.org/10.1016/j.fct.2022.113008>

Received 9 February 2022; Received in revised form 3 April 2022; Accepted 8 April 2022

Available online 15 April 2022

0278-6915/© 2022 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

mechanisms we discuss here, we believe that our work is important for providing a broad understanding of present and future reviews that relate to the burgeoning preclinical molecular work being done in this area.

In this paper, we explore the scientific literature suggesting that vaccination with an mRNA vaccine initiates a set of biological events that are not only different from that induced by infection but are in several ways demonstrably counterproductive to both short- and long-term immune competence and normal cellular function. These vaccinations have now been shown to downregulate critical pathways related to cancer surveillance, infection control, and cellular homeostasis. They introduce into the body highly modified genetic material. A preprint has revealed a remarkable difference between the characteristics of the immune response to an infection with SARS-CoV-2 as compared with the immune response to an mRNA vaccine against COVID-19 (Ivanova et al., 2021). Differential gene expression analysis of peripheral dendritic cells revealed a dramatic upregulation of both type I and type II interferons (IFNs) in COVID-19 patients, but not in vaccinees. One remarkable observation they made was that there was an expansion of circulating hematopoietic stem and progenitor cells (HSPCs) in COVID-19 patients, but this expansion was notably absent following vaccination. A striking expansion in circulating plasmablasts observed in COVID-19 patients was also not seen in the vaccinees. All of these observations are consistent with the idea that the anti-COVID-19 vaccines actively suppress type I IFN signaling, as we will discuss below. In this paper we will be focusing extensively, though not exclusively, on vaccination-induced type I IFN suppression and the myriad downstream effects this has on the related signaling cascade.

Since long-term pre-clinical and Phase I safety trials were combined with Phase II trials, then phase II and III trials were combined (Kwok, 2021); and since even those were terminated early and placebo arms given the injections, we look to the pharmacovigilance system and published reports for safety signals. In doing so, we find that that evidence is not encouraging. The biological response to mRNA vaccination as it is currently employed is demonstrably *not* similar to natural infection. In this paper we will illustrate those differences, and we will describe the immunological and pathological processes we expect are being initiated by mRNA vaccination. We will connect these underlying physiological effects with both realized and yet-to-be-observed morbidities. We anticipate that implementation of booster vaccinations on a wide scale will amplify all of these problems.

The mRNA vaccines manufactured by Pfizer/BioNTech and Moderna have been viewed as an essential aspect of our efforts to control the spread of COVID-19. Countries around the globe have been aggressively promoting massive vaccination programs with the hope that such efforts might finally curtail the ongoing pandemic and restore normalcy. Governments are reticent to consider the possibility that these injections might cause harm in unexpected ways, and especially that such harm might even surpass the benefits achieved in protection from severe disease. It is now clear that the antibodies induced by the vaccines fade in as little as 3–10 weeks after the second dose (Shrotri et al., 2021), such that people are being advised to seek booster shots at regular intervals (Centers for Disease Control and Prevention, 2021b). It has also become apparent that rapidly emerging variants such as the Delta and now the Omicron strain are showing resistance to the antibodies induced by the vaccines, through mutations in the spike protein (Yahi et al., 2021). Furthermore, it has become clear that the vaccines do not prevent transmission of the disease, but can only be claimed to reduce symptom severity (Kampf, 2021a). A study comparing vaccination rates with COVID-19 infection rates across 68 countries and 2947 counties in the United States in early September 2021, found no correlation between the two, suggesting that these vaccines do not protect from spread of the disease (Subramanian and Kumar, 2021). Regarding symptom severity, even this aspect is beginning to be in doubt, as demonstrated by an outbreak in an Israeli hospital that led to the death of five fully vaccinated hospital patients (Shitrit et al., 2021). Similarly, Brosh-Nissimov

et al. (2021) reported that 34/152 (22%) of fully vaccinated patients among 17 Israeli hospitals died of COVID-19.

The increasing evidence that the vaccines do little to control disease spread and that their effectiveness wanes over time make it even more imperative to assess the degree to which the vaccines might cause harm. That SARS-CoV-2 modified spike protein mRNA vaccinations have biological impacts is without question. Here we attempt to distinguish those impacts from natural infection, and establish a mechanistic framework linking those unique biological impacts to pathologies now associated with vaccination. We recognize that the causal links between biological effects initiated by mRNA vaccination and adverse outcomes have not been established in the large majority of cases.

2. Interferons: an overview with attention to cancer surveillance

Discovered in 1957, interferon (IFN) earned its name with the recognition that cells challenged by attenuated influenza A virus created a substance that “interfered with” a subsequent infection by a live virus (Lindenmann, 1982). IFN is now understood to represent a very large family of immune-modulating proteins, divided into three types, designated as type I, II, and III based upon the receptors each IFN interacts with. Type I IFN includes both IFN- α and IFN- β , and this type is the most diverse, being further divided into seventeen subtypes. IFN- α alone has thirteen subtypes currently identified, and each of those is further divided into multiple categories (Wang et al., 2017a). Type I IFNs play a powerful role in the immune response to multiple stressors. In fact, they have enjoyed clinical therapeutic value as a treatment option for a variety of diseases and conditions, including viral infections, solid tumors, myeloproliferative disorders, hematopoietic neoplasms and autoimmune diseases such as multiple sclerosis (Passegu and Ernst, 2009).

As a group, IFNs play exceedingly complicated and pleiotropic roles that are coordinated and regulated through the activity of the family of IFN regulatory factors, or IRFs (Kaur and Fang, 2020). IRF9 is most directly involved in anti-viral as well as anti-tumor immunity and genetic regulation (Alsamman and El-Masry, 2018; Huang et al., 2019; Zitvogel et al., 2015).

Closely related to this are plasmacytoid dendritic cells (pDCs), a rare type of immune cell that circulate in the blood but migrate to peripheral lymphoid organs during a viral infection. They respond to a viral infection by sharply upregulating production of type I IFNs. The IFN- α released in the lymph nodes induces B cells to differentiate into plasmablasts. Subsequently, interleukin-6 (IL-6) induces plasmablasts to evolve into antibody-secreting plasma cells (Jego et al., 2003). Thus, IFNs play a critical role in both controlling viral proliferation and inducing antibody production. Central to both antiviral and anticancer immunity, IFN- α is produced by macrophages and lymphocytes when either is challenged with viral or bacterial infection or encounters tumor cells (De Andrea et al., 2002). Its role as a potent antiviral therapy has been recognized in the treatment of hepatitis C virus complications (Feng et al., 2012), Cytomegalovirus infection (Delannoy et al., 1999), chronic active ebola virus infection (Sakai et al., 1998), inflammatory bowel disease associated with herpes virus infection (Ruther et al., 1998), and others.

Impaired type I IFN signaling is linked to many disease risks, most notably cancer, as type I IFN signaling suppresses proliferation of both viruses and cancer cells by arresting the cell cycle, in part through upregulation of p53, a tumor suppressor gene, and various cyclin-dependent kinase inhibitors (Musella et al., 2017; Matsuoka et al., 1998). IFN- α also induces major histocompatibility (MHC) class I antigen presentation by tumor cells, causing them to be more readily recognized by the cancer surveillance system (Heise et al., 2016; Sundstedt et al., 2008). The range of anticancer effects initiated by IFN- α expression is astounding and occurs through both direct and indirect mechanisms. Direct effects include cell cycle arrest, induction of cell

differentiation, initiation of apoptosis, activation of natural killer and CD8⁺ T cells, and others (Schneider et al., 2014).

The indirect anticancer effects are predominantly carried out through gene transcription activation of the Janus kinase signal transducer and activator of transcription (JAK/STAT) pathway. IFN- α binding on the cell surface initiates JAK, a tyrosine kinase, to phosphorylate STAT1 and STAT2 (Asmana Ningrum, 2014). Once phosphorylated, these STATs form a complex with IRF9, one of a family of IRFs that play a wide range of roles in oncogene regulation and other cell functions (Takaoka et al., 2008). It is this complex, named IFN-stimulated gene factor 3 (ISGF3), that translocates to the cell nucleus to enhance the expression of at least 150 genes (Schneider et al., 2014). IRF9 has been suggested to be the primary member of the IRF family of proteins responsible for activation of the IFN- α antiproliferative effects, and that appears to be through its binding to the tumor necrosis factor-related apoptosis-inducing ligand (TRAIL) receptor 1 and 2 (TRAIL-R1/2) (Tsuno et al., 2009). IRF7 is another crucial member of the IRF family of proteins involved early in the response to a viral infection. It is normally expressed in low amounts but is strongly induced by ISGF3. IRF7 also undergoes serine phosphorylation and nuclear translocation to further activate the immune response. IRF7 has a very short half-life, so its gene-induction process is transient, perhaps to avoid overexpression of IRFs (Honda et al., 2006).

Once TRAIL is bound by IRF9, it is then able to act as a ligand for Death Receptor 4 (DR4) or DR5, initiating a cascade of events involving production of caspase 8 and caspase 3, and ultimately triggering apoptosis (Sayers, 2011). Dysregulation of this pathway, through suppression of either IFN- α or IRF9 and the resulting failure to bind TRAIL-R, has been associated with several hematologic malignancies (Testa, 2010) and has been shown to increase the metastatic potential in animal models of melanoma, colorectal cancer, and lymphoma (Finnberg and El-Deiry, 2008).

IFN- α both initiates and orchestrates a wide range of cancer suppressing roles. Dunn et al. (2005) showed that IFN- α plays an active role in cancer immunoeediting, its locus of action being hematopoietic cells that are “programmed” via IFN- α binding for tumor surveillance. It is via the exceedingly complex interactions between type I IFNs and IRF7 and IRF9 in particular that a great deal of antiproliferative effects are carried out. This is evidenced by the large number of studies showing increased tumor growth and/or metastases associated with a wide number of cancer types.

For example, Bidwell et al. (2012) found that, among over 800 breast cancer patients, those with high expression of IRF7-regulated genes had significantly fewer bone metastases, and they propose assessment of these IRF7-related gene signatures as a way to predict those at greatest risk. Use of microRNA to target IRF7 expression has also been shown to enhance breast cancer cell proliferation and invasion *in vitro* (Li et al., 2015). Zhao et al. (2017) found a similar role for IRF7 in relation to bone metastases in a mouse model of prostate cancer. Regarding the anti-cancer mechanism behind IRF7 expression, Solis et al. (2006) found that IRF7 induces transcription of multiple genes and translation of their downstream protein products including TRAIL, IL-15, ISG-56 and CD80, with the noted therapeutic implications.

IRF9, too, has a central role to play in cancer surveillance and prevention. Erb et al. (2013) demonstrated that IRF9 is the mediator through which IL-6 augments the anti-proliferation effects of IFN- α against prostate cancer cells. Tian et al. (2018) found IRF9 to be a key negative regulator of acute myeloid leukaemia cell proliferation and evasion of apoptosis. It does so, at least in part, through acetylation of the master regulatory protein p53.

Both IFN- α and IRF9 are also apparently necessary for the cancer-preventative properties of a fully functional BRCA2 gene. In a study presented as an abstract at the First AACR International Conference on Frontiers in Basic Cancer Research, Mittal and Chaudhuri (2009) describe a set of experiments which show for the first time that BRCA2 expression leads to increased IFN- α production and augments the signal

transduction pathway resulting in the complexing of IRF9, STAT1 and STAT2 described previously. Two years prior, Buckley et al. (2007) had established that BRCA1 in combination with IFN- γ promotes type I IFNs and subsequent production of IRF7, STAT1, and STAT2. Thus, the exceedingly important cancer regulatory genes BRCA1 and BRCA2 rely on IRF7 and IRF9, respectively, to carry out their protective effects. Rasmussen et al. (2021) reviewed compelling evidence that deficiencies of either IRF7 or IRF9 lead to significantly greater risk of severe COVID-19 illness. Importantly, they also note that evidence suggests type I IFNs play a singularly important role in protective immunity against COVID-19 illness, a role that is shared by multiple cytokines in most other viral illnesses including influenza.

As will be discussed in more detail below, the SARS-CoV-2 spike glycoprotein modifies host cell exosome production. Transfection of cells with the spike protein's gene and subsequent SARS-CoV-2 spike protein production results in those cells generating exosomes containing microRNAs that suppress IRF9 production while activating a range of pro-inflammatory gene transcripts (Mishra and Banerjee, 2021). Since these vaccines are specifically designed to induce high and ongoing production of SARS-CoV-2 spike glycoproteins, the implications are ominous. As described above, inhibition of IRF9 will suppress TRAIL and all its regulatory and downstream apoptosis-inducing effects. IRF9 suppression via exosomal microRNA should also be expected to impair the cancer-protective effects of BRCA2 gene activity, which depends on that molecule for its activity as described above. BRCA2-associated cancers include breast, fallopian tube, and ovarian cancer for women, prostate and breast cancer for men, acute myeloid leukaemia in children, and others (National Cancer Institute, 2021).

Vaccination has also been demonstrated to suppress both IRF7 and STAT2 (Liu et al., 2021). This can be expected to interfere with the cancer-protective effects of BRCA1 as described above. Cancers associated with impaired BRCA1 activity include breast, uterine, and ovarian cancer in women; prostate and breast cancer in men; and a modest increase in pancreatic cancer for both men and women (Cancer risk and BRCA1 gene, 2021).

Reduced BRCA1 expression is linked to both cancer and neurodegeneration. BRCA1 is a well-known breast cancer susceptibility gene. BRCA1 inhibits breast cancer cell proliferation through activation of SIRT1 and subsequent suppression of the androgen receptor (Zhang et al., 2016). In a study conducted by Suberbielle et al. (2015), reduced levels of BRCA1 were found in the brains of Alzheimer's patients. Furthermore, experiments with knocking down neuronal BRCA1 in the dentate gyrus of mice showed that DNA double-strand breaks were increased, along with neuronal shrinkage and impairments in synaptic plasticity, learning and memory.

Analysis detailed in a recent case study on a patient diagnosed with a rare form of lymphoma called angioimmunoblastic T cell lymphoma provided strong evidence for unexpected rapid progression of lymphomatous lesions after administration of the BNT162b2 mRNA booster shot (Goldman et al., 2021). Comparisons of detailed metrics for hypermetabolic lesions conducted immediately before and 21 days after the vaccine booster revealed a five-fold increase after the vaccine, with the post-booster test revealing a 2-fold higher activity level in the right armpit compared to the left one. The vaccine had been injected on the right side. It is worth pointing out in this regard that lymphoid malignancies have been associated with suppression of TRAIL-R1 (MacFarlane et al., 2005).

Given the universally recognized importance of optimally functioning BRCA1/2 for cancer prevention and given the central role of the TRAIL signal transduction pathway for additional cancer surveillance, the suppression of IRF7 and IRF9 through vaccination and subsequent SARS-CoV-2 spike glycoprotein production is extremely concerning for long-term cancer control in SARS-CoV-2 mRNA genetic vaccine injected populations.

3. Considerations in the design of mRNA vaccines

Over the last three decades, the mRNA technological platform aimed to develop effective and safe nucleic acid therapeutic tools is said to have overcome serious obstacles on the coded product instability, the overwhelming innate immunogenicity, and on the delivery methodologies (Pardi et al., 2018). One of the major success stories of mRNA use as a genetic vaccination tool is on the introduction of robust immunity against cancer (Van Lint et al., 2015). In addition, the potential of mRNAs to restore or replace various types of proteins in cases of rare genetic metabolic disorders like Fabry disease has offered great potential therapeutic alternatives where no other medication has proved to be successful (Martini and Guey, 2019). However, in the case of mRNA use as genetic vaccines against infectious diseases, the preliminary safety investigations seemed to be premature for a world-wide use in the general population (Pardi et al., 2018; Douberis et al., 2021).

Although there are essential epitopes on other SARS-CoV-2 proteins where an antibody response could have provided essential immunogenicity, well known from SARS-CoV-1 (Gordon et al., 2020), the primary goal of the developers of the SARS-CoV-2 mRNA vaccines was to design a vaccine that could induce a robust antibody response exclusively to the spike glycoprotein. Such antibodies, especially IgA in the nasopharynx, should cause the invading viruses to be quickly cleared before they could invade host cells, thus arresting the disease process early on. As stated succinctly by Kaczmarek et al. (2021):

“The rationale behind vaccination is to provide every vaccinated person with protection against the SARS-CoV-2 virus. This protection is achieved by stimulating the immune system to produce antibodies against the virus and to develop lymphocytes that will retain memory and the ability to fight off the virus for a long time.” However, since vaccination is given parenterally, IgG is the principal antibody class that is raised against the SARS-CoV-2 spike glycoprotein, not IgA (Wisniewski et al., 2021).

Vaccines generally depend upon adjuvants such as aluminum and squalene to provoke immune cells to migrate to the injection site immediately after vaccination. In the history of mRNA vaccine development, it was initially hoped that the mRNA itself could serve as its own adjuvant. This is because human cells recognize viral RNA as foreign, and this leads to upregulation of type I IFNs, mediated via toll like receptors such as TLR3, TLR7 and TLR8 (Karikó et al., 2005).

However, with time it became clear that there were problems with this approach, both because the intense reaction could cause flu-like symptoms and because IFN- α could launch a cascade response that would lead to the breakdown of the mRNA before it could produce adequate amounts of SARS-CoV-2 spike glycoprotein to induce an immune response (de Beuckelaer et al., 2016). A breakthrough came when it was discovered experimentally that the mRNA coding for the spike protein could be modified in specific ways that would essentially fool the human cells into recognizing it as harmless human RNA. A seminal paper by Karikó et al. (2005) demonstrated through a series of *in vitro* experiments that a simple modification to the mRNA such that all uridines were replaced with pseudouridine could dramatically reduce innate immune activation against exogenous mRNA. Andries et al. (2015) later discovered that 1-methylpseudouridine as a replacement for uridine was even more effective than pseudouridine and could essentially abolish the TLR response to the mRNA, preventing the activation of blood-derived dendritic cells. This modification is applied in both the mRNA vaccines on the market (Park et al., 2021).

Rather prophetically, the extensive review by Forni and Mantovani (2021) has raised serious questions about the development of innate immunity by the mRNA SARS-CoV-2 genetic vaccinations. As the authors declared: “Due to the short development time and the novelty of the technologies adopted, these vaccines will be deployed with several unresolved issues that only the passage of time will permit to clarify.” Subsequently, the authors recommended including certain molecules such as the long pentraxin PTX3 as representative humoral immunity

markers to assess the early activation of innate immune mechanisms and the underlying reactogenicity under the BIOVACSAFE consortium protocols (Forni and Mantovani, 2021; Weiner et al., 2019). However, to the best of our knowledge these safety protocols have not been included in the assessment of induced innate immunity by the SARS-CoV-2 mRNA genetic vaccines (Mulligan et al., 2020).

In this regard, in the case of SARS-CoV-2 BNT162b2 mRNA vaccine, unlike the immune response induced by natural SARS-CoV-2 infection, where a robust interferon response is observed, those vaccinated with BNT162b2 mRNA vaccines developed a robust adaptive immune response which was restricted only to memory cells, i.e., an alternative route of immune response that bypassed the IFN mediated pathways (Mulligan et al., 2020). Furthermore, due to subsequent mutations in the SARS-CoV-2 spike protein, there is a substantial loss of neutralizing antibodies induced by the BNT162b2 mRNA vaccine compared to those conferred by the SARS-CoV-2 mutants alone (Collier et al., 2021). In that respect, as vaccine developers admit: “Vaccine RNA can be modified by incorporating 1-methylpseudouridine, which dampens innate immune sensing and increases mRNA translation *in vivo*.” (Mulligan et al., 2020; Katalin Karikó et al., 2008). Bearing in mind the multiple mutations that SARS-CoV-2 develops, as for example in the Brazil outbreaks (Timmers et al., 2021), an effective immune response that prevents the spread of SARS-CoV-2 mutants necessarily involves the development of a robust IFN-I response as a part of the innate immune system. This response also requires the involvement of a functional NF- κ B response. Unfortunately, spike glycoprotein overexpression dismantles the NF- κ B pathway responses, and this molecular event can be augmented by spike-protein-coding mRNAs (Kyriakopoulos and McCullough, 2021; Jiang and Mei, 2021).

For successful mRNA vaccine design, the mRNA needs to be encapsulated in carefully constructed particles that can protect the RNA from degradation by RNA depolymerases. The mRNA vaccines are formulated as lipid nanoparticles containing cholesterol and phospholipids, with the modified mRNA complexed with a highly modified polyethylene glycol (PEG) lipid backbone to promote its early release from the endosome and to further protect it from degradation (Hou et al., 2021). The host cell's existing biological machinery is co-opted to facilitate the natural production of protein from the mRNA through endosomal uptake of a lipid particle (Hou et al., 2021). A synthetic cationic lipid is added as well, since it has been shown experimentally to work as an adjuvant to draw immune cells to the injection site and to facilitate endosomal escape. de Beuckelaer et al. (2016) observed that “condensing mRNA into cationic lipoplexes increases the potency of the mRNA vaccine evoked T cell response by several orders of magnitude.” Another important modification is that they replaced the code for two adjacent amino acids in the genome with codes for proline, which causes the spike glycoprotein to stay in a prefusion stabilized form (Wrappe et al., 2020).

The SARS-CoV-2 spike glycoprotein mRNA is further “humanized” with the addition of a guanine-methylated cap, 3' and 5' untranslated regions (UTRs) copied from those of human proteins, and finally a long poly(A) tail to further stabilize the RNA (Kyriakopoulos and McCullough, 2021). In particular, researchers have cleverly selected the 3'UTR taken from globins which are produced in large quantities by erythrocytes, because it is very effective at protecting the mRNA from degradation and maintaining sustained protein production (Orlandini von Niessen et al., 2019). This is to be expected, since erythrocytes have no nucleus, so they are unable to replace the mRNAs once they are destroyed. Both the Moderna and the Pfizer vaccines adopted a 3'UTR from globins, and the Pfizer vaccine also uses a slightly modified globin 5'UTR (Xia, 2021). de Beuckelaer et al. (2016) aptly summed up the consequences of such modifications as follows: “Over the past years, technical improvements in the way IVT [*in vitro* transcribed] mRNAs are prepared (5' Cap modifications, optimized GC content, improved polyA tails, stabilizing UTRs) have increased the stability of IVT mRNAs to such extent protein expression can now be achieved for days after direct

in vivo administration of the mRNA.”

However, the optimized analogue cap formation of synthetic mRNAs inevitably forces the recipient cells to undergo a cap-dependent prolonged translation, ignoring homeostatic demands of cellular physiology (Kyriakopoulos and McCullough, 2021). The cap 2'-O methylation carried out by cap 2'-O methyltransferase (CMTR1) serves as a motif that marks the mRNA as “self,” to prevent recognition by IFN-induced RNA binding proteins (Williams et al., 2020). Thus, the mRNA in the vaccines, equipped with the cap 2'-O methylation motif, evades detection as a viral invasion. Furthermore, the overwhelming impetus for cells to perform a single and artificial approach to translation according to the robust capping and synthetic methylations of mRNAs in vaccines is fundamentally associated with disease progression due to differential rather than normal signaling of pattern recognition receptors (PRRs) (Leung and Amarasinghe, 2016).

The regulatory process controlling mRNA translation is extremely complex, and it is highly disturbed in the context of mRNA vaccines (Kyriakopoulos and McCullough, 2021; Leung and Amarasinghe, 2016). Briefly, the idea is for mRNA vaccines to achieve the intended goal (i.e., production of the modified spike protein) through a stealth strategy that bypasses the natural immunological response to RNA-type viral infection. Injected lipid nanoparticles containing mRNA are brought to the cell interior via endocytosis. The mRNA escapes its lipid carrier and migrates to the ribosome, where it is abundantly translated into its final protein product, following an optimized program for producing large quantities of a specific protein over an extended period of time. These modified SARS-CoV-2 spike glycoproteins then follow one of three primary pathways. Some are proteolytically degraded and fragments are bound by MHC class I molecules for surface presentation to cytotoxic T-cells. A second pathway has those same spike glycoprotein fragments bind MHC class II molecules, move to the cell surface, and activate T-helper cells. A final pathway has soluble spike glycoproteins extruded from the cell in exosomes, where they can be recognized by B-cell-activated spike-glycoprotein-specific antibodies (Chaudhary et al., 2021).

A recent early-release study has found that the mRNA in the COVID-19 vaccines is present in germinal centers in secondary lymphoid tissue long after the vaccine is administered, and that it continues to synthesize spike glycoprotein up to at least sixty days post-vaccination (Röltgen et al., 2022). This suggests that immune cells taking up the mRNA in the arm muscle migrate into the lymph system to the lymph nodes, presumably in order to expose B-cells and T-cells to the toxic antigen. The persistence of the mRNA in the lymph nodes and its sustained synthesis of SARS-CoV-2 spike glycoprotein reflect the clever engineering involved in the mRNA technology, as described above.

In the end, it is through utilization of nanolipids and sophisticated mRNA technology that the normal immune response to exogenous RNA is evaded in order to produce a strong antibody response against an exogenous RNA virus.

4. GC enrichment and potential G4 (pG4) structures in vaccine mRNAs

Recently, members of our team investigated possible alterations in secondary structure of mRNAs in SARS-CoV-2 vaccines due to codon optimization of synthetic mRNA transcripts (McKernan et al., 2021). This study has shown that there is a significant enrichment of GC content in mRNAs in vaccines (53% in BNT162b2 and 61% in Moderna mRNA-1273) as compared to the native SARS-CoV-2 mRNA (36%). The enriched GC content of mRNAs is the result of codon optimization performed during the development of the mRNAs used in SARS-CoV-2 vaccines, apparently without determining the effect on secondary structures, particularly the Guanidine quadruplex (G quadruplex) formation (McKernan et al., 2021).

Codon optimization describes the production of synthetic, codon-optimized polypeptides and proteins used in biotechnology therapeutics (such as the synthetic mRNAs used for SARS-CoV-2 vaccination).

The altered codon assignments within the mRNA template dramatically increase the quantity of polypeptides and/or proteins produced (Mauro and Chappell, 2014). Synonymous codon replacement also results in a change in the multifunctional regulatory and structural roles of resulting proteins (Shabalina et al., 2013). For this reason, codon optimization has been cautioned against due to its consequent changes causing perturbation in the secondary conformation of protein products with potentially devastating effects on their resulting immunogenicity, efficacy and function (Zhou et al., 2013; Agashe et al., 2013). Notably, various human diseases are the result of synonymous nucleotide polymorphisms (McCarthy et al., 2017).

In an experiment where GC-rich and GC-poor versions of mRNA transcripts for heat shock protein 70 were configured in the context of identical promoters and UTR sequences, it was found that GC-rich genes were expressed several-fold to over a hundred-fold more efficiently than their GC-poor counterparts (Kudla et al., 2006). This is partly because all of the preferred mammalian codons have G or C nucleotides in the third position. It is also well documented that AU-rich elements in the 3' UTRs can destabilize mRNA (Otsuka et al., 2019). What may be of particular concern is the fact that GC enrichment content in vaccine mRNAs results in an enhanced ability for potential G-quadruplex (pG4) formations in these structures, and this could cause onset of neurological disease (Wang et al., 2021). Remarkably, the human prion protein (PrP) genetic sequence contains multiple G4 forming motifs, and their presence may form the missing link in the initial conversion of PrP to the misfolded form, PrP^{Sc} (Olsthoorn, 2014). PrP binding to its own mRNA may be the seed that causes the protein to misfold. This observation is particularly concerning in light of the fact that the SARS-CoV-2 spike glycoprotein has prion-like characteristics (Tetz and Tetz, 2022).

On the one hand, the GC content has a key role in the modulation of translation efficiency and control of mRNA expression in mammals (Babendure et al., 2006). Especially during translation initiation, the GC content operating as a cis-acting mRNA element orchestrates the 43S ribosomal pre-initiation complex attachment and thereafter the assembly of the eukaryotic translation initiation factor 4F (eIF4F) complex. One representative example of this system in action is the regulation of α and β globin mRNA expression through their 5' untranslated regions (5'UTRs) (Babendure et al., 2006).

On the other hand, the presence of pG4s in RNAs is implicated in cancer biology as key determinants of the regulation of G4 RNA binding proteins such as helicase (Herdy et al., 2018). Generally, the G-quadruplexes in RNAs have essential roles in a) the regulation of gene expression, b) the localization of ribonuclear proteins, c) the mRNA localization and d) the regulation of proto-oncogene expression (Fay et al., 2017).

Regarding SARS-CoV-2, relevant studies reveal overwhelming similarities between SARS-CoV-2 pG4s, including in RNA coding for SARS-CoV-2 spike glycoprotein, and those sequenced in the human transcriptome (Zhang et al., 2020). Thus, it can be inferred that synthetic mRNAs in vaccines carrying more pG4 structures in their coding sequence for SARS-CoV-2 spike glycoprotein will amplify and compound the potential post-transcriptional disorganization due to G4-enriched RNA during natural SARS-CoV-2 infection. Moreover, the cellular nucleic acid binding protein (CNBP), which is the main cellular protein that binds to the SARS-CoV-2 RNA genome in human-infected cells (Schmidt et al., 2021), binds to and promotes the unfolding of SARS-CoV-2 G4s formed by both positive and negative sense template strands of the SARS-CoV-2 RNA genome. A similar modulation of CNBP on vaccine mRNA G4s and promotion of G4 equilibrium towards unfolded conformations create favorable conditions for miRNA binding, and this will have a direct impact on miRNA-dependent regulation of gene expression (Rouleau et al., 2017).

The negative-sense RNAs are intermediate molecules produced by the replicase transcriptase complex (RTC) formed by the nonstructural proteins of coronaviruses (including SARS-CoV-2) to provide efficiency in replication and transcription (Bezzi et al., 2021; Sola et al., 2015).

This, however, introduces another potentially serious complication associated with vaccination. Co-infection with other negative sense RNA viruses such as hepatitis C (Jaubert et al., 2018) or infection by other coronaviruses contemporaneous with vaccination periods would provide the necessary machinery of RTC to reproduce negative sense intermediates from synthetic mRNAs and therefore amplify the presence of pG4s by negative sense templates. This would result in further epitranscriptomic dysregulation (Spiegel et al., 2020).

Summarizing the topic to this point, the enrichment of GC content in vaccine mRNA will inevitably lead to an increase in the pG4 content of the vaccines. This, in turn, will lead to dysregulation of the G4-RNA-protein binding system and a wide range of potential disease-associated cellular pathologies including suppression of innate immunity, neurodegeneration, and malignant transformation (Herdy et al., 2018).

Concerning the post translational dysregulation due to emergence of new G4 structures introduced by vaccination, one other important issue related to miRNA regulation and pG4s arises. In miRNA structures, hundreds of pG4 sequences are identified (Rouleau et al., 2018). In their unfolded conformation, as during binding to their respective targets in 3' to 5' sequences of mRNAs, miRNAs switch off the translation of their respective target mRNA. Alternatively, when in the presence of a G4 ligand, the translation of their target mRNAs is promoted (Chan et al., 2018). Moreover, a vast number of putative miRNA binding sites overlap with G4s in 3' UTRs of mRNAs as there are at least 521 specific miRNAs that are predicted to bind to at least one of these G4s. Overall, 44,294 potential G4-miRNA binding sites have been traced to possess putative overlapping G4s in humans (Rouleau et al., 2017).

As described elsewhere, during the cellular translation of vaccine mRNAs, an increased assembly of a number of RNA binding protein helicases, such as eIF4A bound to eIF4G, will occur (Kyriakopoulos and McCullough, 2021). The presence of increased pG4s in synthetic mRNAs can potentially amplify binding of RNA binding proteins and miRNAs. This form of molecular crowding of protein components (helicases) with great affinity for G4 binding (Rouleau et al., 2017) will decrease the number of RNA binding proteins binding G4s normally available for miRNA regulation. This loss of RNA binding proteins as well as miRNA availability for regulation by binding to G4s can dramatically alter the translational regulation of miRNAs present in cells and thereby disrupt essential regulation of oncogene expression. An example is the p16-dependent regulation of the p53 tumor suppressor protein (Rouleau et al., 2017; Al-Khalaf and Aboussekhra, 2018).

This process is exceedingly complicated yet tantamount to cellular homeostasis. So, again, it merits summarizing. If pG4s accumulate, as would be expected with an increased amount of GC content in the vaccine mRNA, this would have an effect of increasing potential G4 structures available during translation events and this can affect miRNA post-transcriptional regulation. This, in turn, would either favor greater expression of the oncogenes related to a range of cancers, or drive cells towards apoptosis and cell death (Weldon et al., 2018). The case study described earlier in this paper strongly supports the hypothesis that these injections induce accelerated lymphoma progression in follicular B-cells (Goldman et al., 2021).

miRNA binding recognition patterns are imperfectly complementary to their target regions, and for this reason they are referred to as "master regulators," since one miRNA affects a plethora of different targets (Rouleau et al., 2018). The multitude of pG4s in the mRNA of the vaccine would predictably act as decoys, distracting miRNAs from their normal function in regulating human protein expression. The increase in G4 targets due to the vaccine would decrease the availability of miRNAs to target human-expressed G4s for regulation of gene expression. This can result in downregulation of miRNA expression which is implicated in cardiovascular pathology (Small and Olson, 2011), onset of neurodegeneration (Abe and Bonini, 2013), and/or cancer progression (Farazi et al., 2013).

In most respects within epitranscriptomic machinery, miRNAs are

involved in translation repression. One example, vital for cellular normal housekeeping, is that of Mouse double minute 2 homolog (MDM2), a physical negative regulatory protein of p53. P53 itself is considered the master regulator of the cellular tumor suppression network of genes. P16 controls the expression of many miRNAs, and, via miR-141 and miR-146b-5p binding to MDM2 mRNA, it induces the negative regulation of MDM2, thus enabling p53 ubiquitination and promotion of cell survival upon DNA damage events (Al-Khalaf and Aboussekhra, 2018). Dysregulation of miRNAs that control MDM2 suppression of p53 would predictably lead to an increased risk to a range of cancers (Ozaki and Nakagawara, 2011).

5. Type I IFNs and COVID-19

Type I IFNs play an essential role in fighting viral infections, and deficiencies in type I IFN signaling have been associated with poor outcomes from COVID-19 in multiple studies. These cases are often associated with autoantibodies to type I IFNs. As reviewed below, type I IFNs have been used with some success in treating severe COVID-19, particularly if administered very early in the disease process. If, as argued above, the mRNA vaccines interfere with type I IFN signaling, this could lead to increased susceptibility to COVID-19 in the two weeks following the first vaccine, before an antibody response has been initiated.

Cells infected with a virus detect the presence of virus replication through a number of pattern recognition receptors (PRRs), which serve as sentinels sensing aberrant RNA structures that often form during viral replication. These receptors respond by oligomerizing and subsequently inducing type I IFNs, ultimately upregulating a large number of proteins involved in suppressing viral proliferation (Janeway and Medzhitov, 2002).

A multi-author study by researchers in Paris, France, involving a cohort of 50 COVID-19 patients with varying degrees of disease severity, revealed that patients with severe disease were characterized by a highly impaired type I IFN response (Hadjadj et al., 2020). These patients had essentially no IFN- β and low IFN- α production and activity. This was associated with a persistent blood viral load and an exacerbated inflammatory response, characterized by high levels of tumor necrosis factor α (TNF- α) and Il-6. The authors proposed type I IFN therapy as a potential treatment option. A paper by several researchers in the United States also identified a unique and inappropriate inflammatory response in severe COVID-19 patients, characterized by low levels of both type I and type III IFNs along with elevated chemokines and elevated expression of Il-6 (Blanco-Melo et al., 2020).

Type I IFNs have even been proposed as a treatment option for severe COVID-19. In a hamster model, researchers exposed hamsters to SARS-CoV-2 and induced an inflammatory response in the lungs and systemic inflammation in distal tissues. They found that intranasal administration of recombinant IFN- α resulted in a reduced viral load and alleviation of symptoms (Hoagland et al., 2021). A retrospective cohort study of 446 COVID-19 patients determined that early administration of IFN- α 2b was associated with reduced in-hospital mortality. However, late IFN therapy increased mortality and delayed recovery, revealing that early administration of interferon therapy is essential for a favorable response (Wang et al., 2020a).

A surprising number of people have neutralizing autoantibodies against type I IFNs, although the underlying etiology of this phenomenon is not understood. A study using longitudinal profiling of over 600,000 peripheral blood mononuclear cells and transcriptome sequencing from 54 patients with COVID-19 and 26 controls found a notable lack of type I IFN-stimulated gene responses in myeloid cells from patients with critical disease (van der Wijst et al., 2021). Neutralizing autoantibodies against type I IFNs were found in 19% of patients with critical disease, 6% of patients with severe disease, and 0% of patients with moderate disease. Another study based in Madrid, Spain revealed that 10% of patients with severe COVID-19 disease had

autoimmune antibodies to type I IFNs (Troya et al., 2021). A multi-author study based in France found that COVID-19 mortality was significantly more frequent in patients with neutralizing autoantibodies against type I interferon than those without neutralizing antibodies (55% vs. 23%) (Chauvineau - Grenier et al., 2022). Finally, Stertz and Hale (2021) note that, whether due to autoantibodies or perhaps loss-of-function polymorphisms associated with interferon system genes, deficiencies in interferon production are associated with as many as 15% of all life-threatening COVID-19 cases.

6. Are the methylation strategies for cellular housekeeping generally omitted by vaccine mRNAs?

Methylation of mRNAs has been evolutionarily devised to control translation of transcripts and therefore expression of genes by a complex cascade of methylator (writers), de-methylator (eraser) and reader proteins. Adenosine methylation is the most abundant epitranscriptomic mRNA modification, and it occurs at multiple sites across the mRNA molecule (Zaccara et al., 2019). A key methylation of adenosine “N6-methyladenosine (m6A)” specifically in the 5' UTR of mRNAs regulates normal cell physiology, the inflammatory response and cancer progression. The role and mechanisms of m6A in human disease is extensive, and it is excellently covered in other comprehensive reviews (Yang et al., 2020; Knuckles and Bühler, 2018). Foremost among these, the SARS-CoV-2 molecular vaccination induces cell stress conditions, as is described by the elevated NF- κ B signaling after vaccination (Liu et al., 2021; Koo et al., 2010).

Under conditions of cellular stress, which can be induced by a viral infection or disease states such as cancer, m6A mediates mRNAs to undergo translation preferentially in a cap-independent way (Meyer et al., 2015). As discussed previously, this is opposite to the impact of mRNA SARS-CoV-2 vaccination, which drives cells toward a *cap-dependent* translation. Furthermore, under diversified conditions of cellular stress, there is an overwhelming induction of transcriptome-wide addition of m6A that causes an increased number of mRNAs to possess 5'UTRs enriched with m6A (Meyer et al., 2015).

Eukaryotic translation initiation factor 4E (eIF4E) is the initial mRNA cap-binding protein that directs ribosomes to the cap structure of mRNAs, in order to initiate translation into protein. The dependence on cap-dependent translation of vaccine mRNAs will consume a surplus of eIF4E availability needed to translate an unnaturally high number of synthetic mRNAs. However, cap-independent translation takes place without requiring eIF4E to be bound to eIF4F. The competition for ribosomes will shift towards the cap-independent translation of transcripts, since the mRNAs undergoing cap-independent translation are equipped, apart from internal ribosome entry sites (IRES), with special binding motifs that bind to factors that actively recruit mRNAs to the ribosome cap-independent translational enhancers (CITEs) (Shatsky et al., 2018).

Furthermore, this also means that eIF4E, which is a powerful oncogene regulator and cell proliferation modulator, will sustain its activities by this competition for an unnaturally prolonged period of time, trying to counterbalance the competition between robustly-capped mRNAs in vaccines and IRES-containing mRNAs (Kyriakopoulos and McCullough, 2021; Svitkin et al., 2005). This type of condition results in dysregulation of co-transcriptional m6A mRNA modifications and seriously links to molecular progressions of various cancers (Han and Choe, 2020), as well as creating predisposing conditions for subsequent viral infections (Svitkin et al., 2005).

We next consider the impact of mRNA-vaccination-derived SARS-CoV-2 spike glycoprotein on the cellular IFN system via massive exosome production.

7. Exosomes and MicroRNAs

An important communication network among cells consists of

extracellular vesicles (EVs) that are constantly released by one cell and later taken up by another cell, which could be in a distant organ. Small vesicles known as exosomes, formed inside endosomes, are similar in size to viruses, and are released through exocytosis into the extracellular space to subsequently circulate throughout the body (Yoshikawa et al., 2019). Exosomes can deliver a diverse collection of biologically active molecules, including mRNA, microRNAs (miRNAs), proteins, and lipids (Ratajczak and Ratajczak, 2016). During a viral infection, infected cells secrete large quantities of exosomes that act as a communication network among the cells to orchestrate the response to the infection (Chahar et al., 2015).

In a collaborative effort by a team of researchers from Arizona and Connecticut, it was found that people who were vaccinated with the mRNA vaccines acquired circulating exosomes containing the SARS-CoV-2 spike glycoprotein by day 14 following vaccination (Bansal et al., 2021). They also found that there were no circulating antibodies to the spike glycoprotein fourteen days after the first vaccine. After the second vaccine, however, the number of circulating spike-glycoprotein-containing exosomes increased by up to a factor of 12. Furthermore, antibodies first appeared on day 14. The exosomes presented spike glycoprotein on their surface, which, the authors argued, facilitated antibody production. When mice were exposed to exosomes derived from vaccinated people, they developed antibodies to the spike glycoprotein. Interestingly, following peak expression, the number of circulating spike-glycoprotein-containing exosomes decreased over time, in step with the decrease in the level of antibodies to the spike glycoprotein.

Exosomes exist as a part of the mRNA decay mechanism in close association under stress conditions with stress granules (SGs) and P-bodies (PBs) (Decker and Parker, 2012; Kothandan et al., 2020). Under conditions of vaccine-mRNA-induced translation, which could be called “excessive dependence on cap-dependent translation,” there is an obvious resistance to promotion and assembly of the large decapping complex (Kyriakopoulos and McCullough, 2021), and therefore resistance against physiological mRNA decay processes (Decker and Parker, 2012). This would mean that the fate of particular synthetic mRNAs that otherwise would be determined by the common cellular strategy for mRNA turnover involving messenger ribonucleoproteins (mRNPs) is being omitted (Borbolis and Syntichaki, 2015).

Furthermore, under conditions of over-reliance on cap-dependent translation by the synthetic mRNAs in SARS-CoV-2 vaccines (Kyriakopoulos and McCullough, 2021), many native mRNAs holding considerable IRES and specific methylations (m6A) in their structure will favorably choose cap-independent translation, which is strongly linked to mRNA decay quality control mechanisms (Han and Choe, 2020). In this sense, considerable deadenylated mRNA products as well as products derived from mRNA metabolism (decay) are directly linked to exosome cargoes (Borbolis and Syntichaki, 2015).

An example of dependence on cap-dependent translation is described in T-cell acute lymphoblastic leukaemia (T-ALL). Due to mechanistic target of rapamycin C (mTORC)-1 over-functioning in T-ALL, the cells are driven completely towards cap-dependent translation (Girardi and De Keersmaecker, 2015). An analogous condition is described by Kyriakopoulos and McCullough (2021). Even in this highly aggressive cancerous state, during inhibition of cap-dependent translation in T-ALL cells, there is a rapid reversion to cap-independent translation (Girardi and De Keersmaecker, 2015). Similarly, a picornavirus infection (Jang et al., 1990) drives cells towards cap-independent translation due to inhibition of components of eIF4F complex and pluralism of IRES in viral RNA.

In humans, there is an abundance of mostly asymptomatic picornavirus infections like the Safford Virus with an over 90% seroprevalence in young children and adults (Zoll et al., 2009). In either case, whether an apoptotic event due to a stress-like condition (Rusk, 2008) or an mRNA-cap-driven-like carcinomatous effect (De Paolis et al., 2021), the miRNA levels will be increased due to the increased epitranscriptomic

functioning and enhanced mRNA decay. Because of the high demand for gene expression, high levels of certain miRNAs will be expected to be contained in exosomes via P bodies (Yu et al., 2016).

Also, under conditions of overwhelming production of SARS-CoV-2 spike glycoprotein due to SARS-CoV-2 molecular vaccination, it would of course be expected that a significant proportion of over-abundant intracellular spike glycoproteins would also be exported via exosome cargoes (Wei et al., 2021).

Mishra and Banerjea (2021) investigated the role of exosomes in the cellular response of SARS-CoV-2 spike-transfected cells. They wrote in the abstract:

“We propose that SARS-CoV-2 gene product, Spike, is able to modify the host exosomal cargo, which gets transported to distant uninfected tissues and organs and can initiate a catastrophic immune cascade within Central Nervous System (CNS).”

Their experiments involved growing human HEK293T cells in culture and exposing them to SARS-CoV-2 spike gene plasmids, which induced synthesis of spike glycoprotein within the cells. They found experimentally that these cells released abundant exosomes housing spike glycoprotein along with specific microRNAs. They then harvested the exosomes and transferred them to a cell culture of human microglia (the immune cells that are resident in the brain). They showed that the microglia readily took up the exosomes and responded to the microRNAs by initiating an acute inflammatory response. The role of microglia in causing neuroinflammation in various viral diseases, such as Human Immunodeficiency Virus (HIV), Japanese Encephalitis Virus (JEV), and Dengue, is well established. They proposed that long-distance cell-cell communication via exosomes could be the mechanism by which neurological symptoms become manifest in severe cases of COVID-19.

In further exploration, the authors identified two microRNAs that were present in high concentrations in the exosomes: miR-148a and miR-590. They proposed a specific mechanism by which these two microRNAs would specifically disrupt type I interferon signaling, through suppression of two critical proteins that control the pathway: ubiquitin specific peptidase 33 (USP33) and IRF9. Phosphorylated STAT1 and STAT2 heterodimers require IRF9 in order to bind IFN-stimulated response elements, and therefore IRF9 plays an essential role in the signaling response. The authors showed experimentally that microglia exposed to the exosomes extracted from the HEK293 culture had a 50% decrease in cellular expression of USP33 and a 60% decrease in IRF9. They further found that miR-148a specifically blocks USP33 and miR-590 specifically blocks IRF9. USP33 removes ubiquitin from IRF9, and in so doing it protects it from degradation. Thus, the two microRNAs together conspire to interfere with IRF9, thus blocking receptor response to type I interferons.

A study by de Gonzalo-Calvo et al. (2021) looked at the microRNA profile in the blood of COVID-19 patients and their quantitative variance based upon disease severity. Multiple miRNAs were found to be up- and down-regulated. Among these was miR-148a-3p, the guide strand precursor to miR-148a. However, miR-148a itself was not among the microRNAs catalogued as excessive or deficient in their study, nor was miR-590. It appears from these findings that miR-148a and miR-590 and their inflammatory effects are unique to vaccination-induced SARS-CoV-2 spike glycoprotein production.

Tracer studies have shown that, following injection into the arm muscle, the mRNA in mRNA vaccines is carried into the lymph system by immune cells and ultimately accumulates in the spleen in high concentrations (Bahl et al., 2017). Other studies have shown that stressed immune cells in germinal centers in the spleen release large quantities of exosomes that travel to the brain stem nuclei along the vagus nerve (as reviewed in Seneff and Nigh (2021)). The vagus nerve is the 10th cranial nerve and it enters the brainstem near the larynx. The superior and recurrent laryngeal nerves are branches of the vagus that innervate structures involved in swallowing and speaking. Lesions in these nerves

cause vocal cord paralysis associated with difficulty swallowing (dysphagia) difficulty speaking (dysphonia) and/or shortness of breath (dyspnea) (Gould et al., 2019; Erman et al., 2009). We will return to these specific pathologies in our review of VAERS data below.

HEK293 cells were originally derived from cultures taken from the kidney of a human fetus several decades ago and immortalized through infection with adenovirus DNA. While they were extracted from the kidney, the cells show through their protein expression profile that they are likely to be of neuronal origin (Shaw et al., 2002). This suggests that neurons in the vagus nerve would respond similarly to the SARS-CoV-2 spike glycoprotein. Thus, the available evidence strongly suggests that endogenously produced SARS-CoV-2 spike glycoprotein creates a different microRNA profile than does natural infection with SARS-CoV-2, and those differences entail a potentially wide range of deleterious effects.

A central point of our analysis below is the important distinction between the impact of vaccination versus natural infection on type I IFN. While vaccination actively suppresses its production, natural infection promotes type I IFN production very early in the disease cycle. Those with preexisting conditions often exhibit impaired type I IFN signaling, which leads to more severe, critical, and even fatal COVID-19. If the impairment induced by the vaccine is maintained as antibody levels wane over time, this could lead to a situation where the vaccine causes a more severe disease expression than would have been the case in the absence of the vaccine.

Another expected consequence of suppressing type I IFN would be reactivation of preexisting, chronic viral infections, as described in Section 9.

8. Impaired DNA repair and adaptive immunity

The immune system and the DNA repair system are the two primary systems that higher organisms rely on for defense against diverse threats, and they share common elements. Loss of function of key DNA repair proteins leads to defects in repair that inhibit the production of functional B- and T-cells, resulting in immunodeficiency. Non-homologous end joining (NHEJ) repair plays a critical role in lymphocyte-specific V(D)J recombination, which is essential for producing the highly diverse repertoire of B-cell antibodies in response to antigen exposure (Jiang and Mei, 2021). Impaired DNA repair is also a direct pathway towards cancer.

A paper published by Liu et al., in 2021 monitored several parameters associated with immune function in a cohort of patients by conducting single-cell mRNA sequencing of peripheral blood mononuclear cells (PBMCs) harvested from the patients before and 28 days after the first injection of a COVID-19 vaccine based on a weakened version of the virus (Liu et al., 2021). While these vaccines are different from the mRNA vaccines, they also work by injecting the contents of the vaccine into the deltoid muscle, bypassing the mucosal and vascular barriers. The authors found consistent alteration of gene expression following vaccination in many different immune cell types. Observed increases in NF- κ B signaling and reduced type I IFN responses were further confirmed by biological assays. Consistent with other studies, they found that STAT2 and IRF7 were significantly downregulated 28 days after vaccination, indicative of impaired type I IFN responses. They wrote: “Together, these data suggested that after vaccination, at least by day 28, other than generation of neutralizing antibodies, people’s immune systems, including those of lymphocytes and monocytes, were perhaps in a more vulnerable state.” (Liu et al., 2021).

These authors also identified disturbing changes in gene expression that would imply impaired ability to repair DNA. Up to 60% of the total transcriptional activity in growing cells involves the transcription of ribosomal DNA (rDNA) to produce ribosomal RNA (rRNA). The enzyme that transcribes ribosomal DNA into RNA is RNA polymerase I (Pol I). Pol I also monitors rDNA integrity and influences cell survival (Kakarougkas et al., 2013). During transcription, RNA polymerases (RNAPs)

actively scan DNA to find bulky lesions (double-strand breaks) and trigger their repair. In growing eukaryotic cells, most transcription involves synthesis of ribosomal RNA by Pol I. Thus, Pol I promotes survival following DNA damage (Kakarougkas et al., 2013). Many of the down-regulated genes identified by Liu et al. (2021) were linked to the cell cycle, telomere maintenance, and both promoter opening and transcription of POL I, indicative of impaired DNA repair processes.

One of the gene sets that were suppressed was due to “deposition of new CENPA [centromere protein A] containing nucleosomes at the centromere.” Newly synthesized CENPA is deposited in nucleosomes at the centromere during late telophase/early G1 phase of the cell cycle. This points to arrest of the cell cycle in G1 phase as a characteristic feature of the response to the inactivated SARS-CoV-2 vaccine. Arrest of pluripotent embryonic stem cells in the G1 phase (prior to replication initiation) would result in impaired self-renewal and maintenance of pluripotency (Choi et al., 2013).

Two checkpoint proteins crucially involved in DNA repair and adaptive immunity are BRCA1 and 53BP1, which facilitate both homologous recombination (HR) and NHEJ, the two primary repair processes (Zhang and Powell, 2005; Panier and Boulton, 2014). In an *in vitro* experiment on human cells, the SARS-CoV-2 full-length spike glycoprotein was specifically shown to enter the nucleus and hinder the recruitment of these two repair proteins to the site of a double-strand break (Jiang and Mei, 2021). The authors summarized their findings by saying, “Mechanistically, we found that the spike protein localizes in the nucleus and inhibits DNA damage repair by impeding key DNA repair protein BRCA1 and 53BP1 recruitment to the damage site.”

Another mechanism by which the mRNA vaccines could interfere with DNA repair is through miR-148. This microRNA has been shown to downregulate HR in the G1 phase of the cell cycle (Choi et al., 2014). As was mentioned earlier in this paper, this was one of the two microRNAs found in exosomes released by human cells following SARS-CoV-2 spike glycoprotein synthesis in the experiments by Mishra and Banerjee (2021).

9. Reactivation of varicella-zoster

Type I IFN receptor signaling in CD8⁺ T cells is critical for the generation of effector and memory cells in response to a viral infection (Kolumam et al., 2005). CD8⁺ T cells can block reactivation of latent herpes infection in sensory neurons (Liu et al., 2000). If type I IFN signaling is impaired, as happens following vaccination but not following natural infection with SARS-CoV-2, CD8⁺ T cells' ability to keep herpes in check would also be impaired. Might this be the mechanism at work in response to the vaccines?

Shingles is an increasingly common condition caused by reactivation of latent herpes zoster viruses (HZV), which also causes chicken pox in childhood. In a systematic review, Katsikas Triantafyllidis et al. (2021) identified 91 cases of herpes zoster occurring an average of 5.8 days following mRNA vaccination. While acknowledging that causality is not yet confirmed, “Herpes zoster is possibly a condition physicians and other healthcare professionals may expect to see in patients receiving COVID-19 vaccines” (Katsikas Triantafyllidis et al., 2021). In a letter to the editor published in September 2, 2021, Fathy et al. (2022) reported on 672 cases of skin reactions that were presumably vaccine-related, including 40 cases of herpes zoster and/or herpes simplex reactivation. These cases had been reported to the American Academy of Dermatology and the International League of Dermatologic Societies' COVID-19 Dermatology Registry, established specifically to track dermatological sequelae from the vaccines. There are multiple additional case reports of herpes zoster reactivation following COVID-19 vaccination in the literature (Psychogiou et al., 2021b; Iwanaga et al., 2021). Lladó et al. (2021) noted that 51 of 52 reports of reactivated herpes zoster infections happened following mRNA vaccination. Herpes zoster itself also interferes with IFN- α signaling in infected cells both through interfering with STAT2 phosphorylation and through

facilitating IRF9 degradation (Verweij et al., 2015).

An additional case of viral reactivation is noteworthy as well. It involved an 82-year-old woman who had acquired a hepatitis C viral (HCV) infection in 2007. A strong increase in HCV load occurred a few days after vaccination with an mRNA Pfizer/BioNTech vaccine, along with an appearance of jaundice. She died three weeks after vaccination from liver failure (Lensen et al., 2021).

10. Immune thrombocytopenia

Immune thrombocytopenia is an autoimmune disorder, where the immune system attacks circulating platelets. Immune thrombocytopenic purpura (ITP) has been associated with several vaccinations, including measles, mumps, rubella (MMR), hepatitis A, varicella, diphtheria, tetanus, pertussis (DPT), oral polio and influenza (Perricone et al., 2014). While there is broad awareness that the adenovirus DNA-based vaccines can cause vaccine-induced immune thrombotic thrombocytopenia (VITT) (Kelton et al., 2021), the mRNA vaccines are not without risk to VITT, as case studies have been published documenting such occurrences, including life threatening and fatal cerebral venous sinus thrombosis (Lee et al., 2021; Akiyama et al., 2021; Atoui et al., 2022; Zakaria et al., 2021). The mechanism is believed to involve VITT antibodies binding to platelet factor 4 (PF4) and forming immune complexes that induce platelet activation. Subsequent clotting cascades cause the formation of diffuse microclots in the brain, lungs, liver, legs and elsewhere, associated with a dramatic drop in platelet count (Kelton et al., 2021). The reaction to the vaccine has been described as being very similar to heparin-induced thrombocytopenia (HIT), except that heparin administration is notably not involved (Cines and Busse, 2021).

It has been shown that the mRNA vaccines elicit primarily an immunoglobulin G (IgG) immune response, with lesser amounts of IgA induced (Wisniewski et al., 2021), and even less IgM production (Danese et al., 2021). The amount of IgG antibodies produced is comparable to the response seen in severe cases of COVID-19. It is IgG antibodies in complex with heparin that induce HIT. One can hypothesize that IgG complexed with the SARS-CoV-2 spike glycoprotein and PF4 is the complex that induces VITT in response to mRNA vaccines. It has in fact been shown experimentally that the receptor binding domain (RBD) of the spike protein binds to PF4 (Passariello et al., 2021).

The underlying mechanism behind HIT has been well studied, including through the use of humanized mouse models. Interestingly, human platelets, but not mouse platelets, express the Fc γ RIIA receptor, which responds to PF4/heparin/IgG complexes through a tyrosine phosphorylation cascade to induce platelet activation. Upon activation, platelets release granules and generate procoagulant microparticles. They also take up calcium, activate protein kinase C, clump together into microthrombi, and launch a cell death cascade via calpain activation. These activated platelets release PF4 into the extracellular space, supporting a vicious cycle, as this additional PF4 also binds to heparin and IgG antibody to further promote platelet activation. Thus, Fc γ RIIA is central to the disease process (Nevzorova et al., 2019).

Studies on mice engineered to express the human Fc γ RIIA receptor have shown that these transgenic mice are far more susceptible to thrombocytopenia than their wild type counterparts (McKenzie et al., 1999). It has been proposed that platelets may serve an important role in the clearance of antibody-antigen complexes by trapping the antigen in thrombi and/or carrying them into the spleen for removal by immune cells. Platelets are obviously rapidly consumed in the process, which then results in low platelet counts (thrombocytopenia).

Platelets normally circulate with an average lifespan of only five to nine days, so they are constantly synthesized in the bone marrow and cleared in the spleen. Antibody-bound platelets, subsequent to platelet activation via Fc γ receptors, migrate to the spleen where they are trapped and removed through phagocytosis by macrophages (Crow and Lazarus, 2003). Fully one third of the body's total platelets are found in the spleen. Since the mRNA vaccines are carried into the spleen by

immune cells initially attracted to the injection site in the arm muscle, there is tremendous opportunity for the release of spike-glycoprotein-containing exosomes by dendritic cells in the spleen synthesizing spike protein. One can speculate that platelet activation following the formation of a P4F/IgG/spike protein complex in the spleen is part of the mechanism that attempts to clear the toxic spike glycoprotein.

We mentioned earlier that one of the two microRNAs highly expressed in exosomes released by human cells exposed to the SARS-CoV-2 spike glycoprotein was miR-148a. miR-148a has been shown experimentally to suppress expression of a protein that plays a central role in regulating FcγRIIA expression on platelets. This protein, called T-cell ubiquitin ligand-2 (TULA-2), specifically inhibits activity of the platelet Fcγ receptor. miR-148a targets TULA-2 mRNA and down-regulates its expression. Thus, miR-148a, present in exosomes released by macrophages that are compelled by the vaccine to synthesize SARS-CoV-2 spike glycoprotein, acts to increase the risk of thrombocytopenia in response to immune complexes formed by spike glycoprotein antigen and IgG antibodies produced against the spike glycoprotein.

11. PPAR-α, sulfatide and liver disease

As we have already stated, an experiment by [Mishra and Banerjee \(2021\)](#) demonstrated that the SARS-CoV-2 spike glycoprotein induces the release of exosomes containing microRNAs that specifically interfere with IRF9 synthesis. In this section we will show that one of the consequences of suppression of IRF9 would be reduced synthesis of sulfatide in the liver, mediated by the nuclear receptor peroxisome proliferator-activated receptor α (PPAR-α).

Sulfatides are major mammalian serum sphingoglycolipids which are synthesized and secreted mainly from the liver ([Lu et al., 2019](#)). They are the only sulfonated sphingolipids in the body. Sulfatides are formed by a two-step process involving the conversion of ceramide to galactocerebroside and its subsequent sulfation. Sulfatide is expressed on the surface of platelets, erythrocytes and lymphocytes. Serum sulfatides exert both anti-coagulative and anti-platelet-activation functions. The enzyme in the liver that synthesizes sulfatide, cerebroside sulfo-transferase, has specifically been found to be induced by activation of PPAR-α in mice ([Kimura et al., 2012](#)). Therefore, reduced expression of PPAR-α leads to sulfatide deficiency.

PPAR-α ligands exhibit anti-inflammatory and anti-fibrotic effects, whereas PPAR-α deficiency leads to hepatic steatosis, steatohepatitis, steatofibrosis, and liver cancer ([Wang et al., 2020b](#)). In 2019, an experiment was conducted by a team of researchers in Japan on mice with a defective gene for PPAR-α ([Lu et al., 2019](#)). These mice, when fed a high cholesterol diet, were susceptible to excess triglyceride accumulation and exacerbated inflammation and oxidative stress in the liver, along with increased levels of coagulation factors. The mice also manifested with decreased levels of sulfatides in both the liver and the serum. The authors hypothesized that cholesterol overload exerts its toxic effects in part by enhancing thrombosis, following abnormal hepatic lipid metabolism and oxidative stress. They showed that PPAR-α can attenuate these toxic effects through transcriptional regulation of coagulation factors and upregulation of sulfatide synthesis, in addition to its effects in ameliorating liver disease. They proposed that therapies such as fibrates aimed at activating PPAR-α might prevent high-cholesterol-diet-induced cardiovascular disease.

Tracer studies have shown that the mRNA from mRNA vaccines migrates preferentially to the liver and spleen, reaching higher concentration there than in any other organs ([Bahl et al., 2017](#)). Thus, there is potential for suppression of IRF9 in the liver by the vaccine. IRF9 is highly expressed in hepatocytes, where it interacts with PPAR-α, activating PPAR-α target genes. A study on IRF9 knockout mice showed that these mice developed steatosis and hepatic insulin resistance when exposed to a high-fat diet. In contrast, adenoviral-mediated hepatic IRF9 overexpression in obese mice improved insulin sensitivity and

ameliorated steatosis and inflammation ([Wang et al., 2013](#)).

Multiple case reports in the research literature describe liver damage following mRNA vaccines ([Zin Tun et al., 2021](#); [Dumortiera, 2022](#); [Mann et al., 2021](#)). A plausible factor leading to these outcomes is the suppression of PPAR-α through downregulation of IRF9, and subsequently decreased sulfatide synthesis in the liver.

12. Guillain Barré syndrome and neurologic injury syndromes

GBS is an acute inflammatory demyelinating neuropathy associated with long-lasting morbidity and a significant risk of mortality ([Créange, 2000](#)). The disease involves an autoimmune attack on the nerves associated with the release of pro-inflammatory cytokines.

GBS is often associated with autoantibodies to sulfatide and other sphingolipids ([Ilyas et al., 1991](#)). Activated T-cells produce cytokines in response to antigen presentation by macrophages, and these cytokines can induce autoantibody production through epitope spreading ([Vanderlugt and Miller, 2002](#)). The antibodies, in turn, induce complement activation, which causes demyelination and axonal damage, leading to severe injury to peripheral neurons ([Kuwahara and Kusunoki, 2018](#)). The SARS-CoV-2 spike glycoprotein has been shown to bind to heparan sulfate, which is a sulfated amino-sugar complex resembling the sulfated galactose in sulfatide ([Kalra and Kandimalla, 2021](#)). Thus, it is conceivable that the spike glycoprotein also binds to sulfatide, and this might trigger an immune reaction to the spike-glycoprotein-sulfatide complex.

As described in the previous section, impaired sulfatide synthesis in the liver due to suppression of IRF9 will lead to systemic sulfatide deficiency over time. Sulfatide deficiency can have major impact in the brain and nervous system. Twenty percent of the galactolipids found in the myelin sheath are sulfatides. Sulfatide is a major component of the nervous system, found in especially high concentrations in the myelin sheath in both the peripheral and the central nervous system. Deficiencies in sulfatide can lead to muscle weakness, tremors, and ataxia ([Honke, 2013](#)), which are common symptoms of GBS. Chronic neuro-inflammation mediated by microglia and astrocytes in the brain leads to dramatic losses of brain sulfatide, and brain deficiencies in sulfatide are a major feature of Alzheimer's disease ([Qiu et al., 2021](#)). Mice with a defect in the ability to synthesize sulfatide from ceramide show an impaired ability to maintain the health of axons as they age. Over time, they develop redundant, uncompact and degenerating myelin sheaths as well as deteriorating structure at the nodes of Ranvier in the axons, causing the loss of a functionally competent axoglial junction ([Marcus et al., 2006](#)).

Angiotensin II (Ang II), in addition to its profound effects on cardiovascular disease, also plays a role in inflammation in the brain leading to neurodegenerative disease ([Lanz et al., 2010](#)). The SARS-CoV-2 spike glycoprotein contains a unique furin cleavage site not found in SARS-CoV, which allows the extracellular enzyme furin to detach the S1 segment of the spike glycoprotein and release it into circulation ([Letarov et al., 2021](#)). S1 has been shown to cross the blood-brain barrier in mice ([Rhea et al., 2021](#)). S1 contains the receptor binding domain that binds to ACE2 receptors, disabling them. When ACE2 receptor signaling is reduced, Ang II synthesis is increased. Neurons in the brain possess ACE2 receptors that would be susceptible to disruption by S1 released from spike-glycoprotein-containing exosomes or spike-glycoprotein-producing cells that had taken up the nanoparticles in the vaccines. Ang II enhances TLR4-mediated signaling in microglia, inducing microglial activation and increasing the production of reactive oxygen species leading to tissue damage, within the paraventricular nucleus in the brain ([Rodriguez-Perez et al., 2015](#)).

Elevated levels of Ang II is a causal factor in neurodegeneration of the optic nerve, causing optic neuritis, which can result in severe irreversible visual loss ([Guo et al., 2017](#)). Multiple case reports have described cases of optic neuropathy appearing shortly after mRNA vaccination for COVID-19 ([Maleki, 2021](#); [Barone et al., 2021](#)). Other

debilitating neurological conditions are also appearing shortly after vaccination, where a causal relationship is suspected. A case study based in Europe tracking neurological symptoms following COVID-19 vaccination identified 21 cases developing within a median of 11 days post-vaccination. The cases had diverse diagnoses including cerebral venous sinus thrombosis, nervous system demyelinating diseases, inflammatory peripheral neuropathies, myositis, myasthenia, limbic encephalitis, and giant cell arteritis (Kaulen et al., 2021). Khayat-Khoei et al. (2021) describe a case series of 7 patients, ages ranging from 24 to 64, presenting with demyelinating disease within 21 days of a first or second mRNA vaccination. Four had a prior history of (controlled) MS, while three were previously healthy.

Hearing loss and tinnitus are also well-known side effects of COVID-19. A case study involved a series of ten COVID-19 patients who suffered from audiovestibular symptoms such as hearing loss, vestibular dysfunction and tinnitus (Jeong et al., 2021). The authors demonstrated that human inner ear tissue expresses ACE2, furin and the transmembrane protease serine 2 (TMPRSS2), which facilitates viral entry. They also showed that SARS-CoV-2 can infect specific human inner ear cell types.

Another study evaluating the potential for the SARS-CoV-2 virus to infect the ear specifically examined expression of the receptor ACE2 and the enzymes furin and TM-PRSS2 various types of cells in the middle and inner ears of mice. They found that ACE2 and furin were “diffusely present in the eustachian tube, middle ear spaces, and cochlea, suggesting that these tissues are susceptible to SARS-CoV-2 infection.” (Uranaka et al., 2021). Tinnitus is positively associated with hypertension, which is induced by elevated levels of Ang II (Rodrigues Figueiredo et al., 2016).

Headache is a very common adverse reaction to the COVID-19 mRNA vaccines, particularly for people who are already susceptible to headaches. In a study based on a questionnaire involving 171 participants, the incidence of headaches was found to be 20.5% after the first vaccine, rising to 45.6% after the second shot (Sekiguchi et al., 2021). A case study described a 37-year-old woman suffering from a debilitating migraine attack lasting for 11 days following the second Pfizer/BioNTech mRNA vaccine (Consoli et al., 2021).

Steroids are often used as adjunct therapy to treat migraine (Huang et al., 2013). Dexamethasone and other steroids stimulate PPAR- α receptors in the liver through the steroid receptor, thus offsetting the effects of IRF9 suppression (Lemberger et al., 1994). A theory for the origins of migraine involves altered processing of sensory input in the brainstem, primarily trigeminal neurons (Dodick and Silberstein, 2006). The trigeminal nerve is in close proximity to the vagus nerve in the brainstem, so spike-glycoprotein-carrying exosomes could easily reach it along the vagal route. Magnetic resonance imaging has revealed that structural changes in the trigeminal nerve reflecting aberrant microstructure and demyelination are a characteristic feature of people who suffer from frequent migraine headaches (Mungoven et al., 2020). A potential factor linked to either SARS-CoV-2 infection or mRNA vaccination is an excessive level of Ang II in the brainstem due to SARS-CoV-2 spike glycoprotein inhibition of ACE2 receptors. ACE inhibitors and Ang II receptor antagonists have become popular drugs to treat migraine headaches off-label (Tronvik et al., 2003; Nandha and Singh, 2012). Migraine headache could thus arise from both the spike glycoprotein's disruption of ACE2 receptors and the destruction of the myelin sheath covering critical facial nerves through a microglial inflammatory response and loss of sulfatide. The source of that spike glycoprotein could be either exogenous or endogenous.

13. Bell's palsy

Bell's palsy is a common cranial neuropathy causing unilateral facial paralysis. Even in the Phase III clinical trials, Bell's palsy stood out, with seven cases appearing in the treatment arm as compared to only one in the placebo group (FDA, 2021a; FDA, 2021b). A case study reported in

the literature involved a 36-year-old man who developed weakness in the left arm one day after vaccination, progressing to numbness and tingling in the arm and subsequent symptoms of Bell's palsy over the next few days. A common cause of Bell's palsy is reactivation of herpes simplex virus infection centered around the geniculate ganglion (Eviston et al., 2015). This, in turn, can be caused by disruption of type I IFN signaling.

14. Myocarditis

There has been considerable media attention devoted to the fact that COVID-19 vaccines cause myocarditis and pericarditis, with an increased risk in particular for men below the age of 50 (Simone et al., 2021; Jain et al., 2021). The SARS-CoV-2 spike glycoprotein has been demonstrated to injure cardiac pericytes, which support the capillaries and the cardiomyocytes (Avolio et al., 2020). Myocarditis is associated with platelet activation, so this could be one factor at play in the response to the vaccines (Weikert et al., 2002). However, another factor could be related to exosomes released by macrophages that have taken up the mRNA nanoparticles, and the specific microRNAs found in those exosomes.

A study involving patients suffering from severe COVID-19 disease looked specifically at the expression of circulating microRNAs compared to patients suffering from influenza and to healthy controls. One microRNA that was consistently upregulated in association with COVID-19 was miR-155, and the authors suggested that it might be a predictor of chronic myocardial damage and inflammation. By contrast, influenza infection was not associated with increased miR-155 expression. They concluded: “Our study identified significantly altered levels of cardiac-associated miRs [microRNAs] in COVID-19 patients indicating a strong association of COVID-19 with cardiovascular ailments and respective biomarkers” (Garg et al., 2021).

A study comparing 300 patients with cardiovascular disease to healthy controls showed a statistically significant increase in circulating levels of miR-155 in the patients compared to controls. Furthermore, those with more highly constricted arteries (according to a Gensini score) had higher levels than those with lesser disease (Qiu and Ma, 2018).

Importantly, exosomes play a role in inflammation in association with heart disease. During myocardial infarction, miR-155 is sharply upregulated in macrophages in the heart muscle and released into the extracellular milieu within exosomes. These exosomes are delivered to fibroblasts, and miR-155 downregulates proteins in the fibroblasts that protect from inflammation and promote fibroblast proliferation. The resulting impairment leads to cardiac rupture (Wang et al., 2017b).

We have already discussed how the S1 segment of the SARS-CoV-2 spike glycoprotein can be cleaved by furin and released into circulation. It binds to ACE2 receptors through its receptor binding domain (RBD), and this inhibits their function. Because ACE2 degrades Ang II, disabling ACE2 leads directly to overexpression of Ang II, further enhancing risk to cardiovascular disease. AngII-induced vasoconstriction is an independent mechanism to induce permanent myocardial injury even when coronary obstruction is not present. Repeated episodes of sudden constriction of a cardiac artery due to Ang II can eventually lead to heart failure or sudden death (Gavras and Gavras, 2002). Fatal cases of COVID-19 vaccination have been described (Choi et al., 2021; Verma et al., 2021).

ACE2 suppression had already been seen in studies on the original SARS-CoV virus. An autopsy study on patients succumbing to SARS-CoV revealed an important role for ACE2 inhibition in promoting heart damage. SARS-CoV viral RNA was detected in 35% of 20 autopsied human heart samples taken from patients who died. There was a marked increase in macrophage infiltration associated with myocardial damage in the patients whose hearts were infected with SARS-CoV. Importantly, the presence of SARS-CoV in the heart was associated with marked reduction in ACE2 protein expression (Oudit et al., 2009).

15. Considerations regarding the Vaccine Adverse Event Reporting System (VAERS)

The Food and Drug Administration's Vaccine Adverse Event Reporting System (VAERS) is an imperfect but valuable resource for identifying potential adverse reactions to vaccines. Established through collaboration between the CDC and FDA, VAERS is "a national early warning system to detect possible safety problems in U.S.-licensed vaccines." According to the CDC it is "especially useful for detecting unusual or unexpected patterns of adverse event reporting that might indicate a possible safety problem with a vaccine." (<https://vaers.hhs.gov/about.html>) Even the CDC recognizes that adverse events reported to VAERS represent "only a small fraction of actual adverse events" (Vaers Home, 2021). A widely cited report noted that fewer than 1% of all vaccine-related adverse events are reported to VAERS (Lazarus et al., 2010). That assertion, though, has no citation so the basis for the claim is unclear. Rose (2021) published a much more sophisticated analysis of VAERS data to offer an estimate of underreporting by a factor of 31 (Rose, 2021). While it is impossible to determine underreporting with precision, the available evidence is that underreporting very strongly characterizes the VAERS data. The information presented below should be understood in that light.

In mining VAERS for 'signals' that might indicate adverse reactions (AEs) to mRNA vaccinations, we acknowledge that no report to VAERS establishes a causal link with the vaccination. That said, the possibility of a causal relationship is strengthened through both the causal pathways we have described in this paper, and the strong temporal association between injections and reported AEs. Nearly 60% of all mRNA-injection-related -AEs have happened within 48 h of injection (<https://medalerts.org/vaersdb/findfield.php?TABLE=ON&GROUP1=ONS&EVENTS=ON&VAX=COVID19&VAXTYPES=COVID-19&TATE=NOTFR>).

Two important cautions regarding analysis of VAERS data should be noted. The first is that, in addition to health care professionals submitting reports, VAERS is open for public submissions as well. Members of the public may lack the skills necessary to evaluate a symptom appropriately to determine if it merits a VAERS entry. A second caution is that public access also allows for the possibility of anti-vaccination activists to populate VAERS with false reports to exaggerate the appearance of AE risk.

An interim analysis of deaths cited previously found that health service employees were the VAERS reporter in 67% of reports analyzed (Nandha and Singh, 2012), suggesting a large portion of VAERS reports are submitted by medical professionals and not the public. This finding also belies the notion that anti-vaccination activists are filing an excessive number of egregious reports of vaccine injury.

All of the data reported in this section were obtained by querying the online resource, <http://wonder.cdc.gov/vaers.html>. Over the 31-year history of VAERS, up to February 3, 2022, there were a total of 10,321 deaths reported as a "symptom" in association with any vaccine, and 8,241 (80%) of those deaths were linked to COVID-19 vaccines. Importantly, only 14% of COVID-19 VAERS-reported deaths as of June 2021 could have vaccination ruled out as a cause (McLachlan et al., 2021). This strongly suggests that these unprecedented vaccines exhibit unusual mechanisms of toxicity that go well beyond what is seen with more traditional vaccines.

We decided that a reasonable way to characterize the significance of adverse events linked to COVID-19 vaccines was to focus on events received in the year 2021, and to compare the counts in the "SYMPTOM" field for the events associated with COVID-19 vaccines to the total counts for that same symptom for all vaccines over that same year. In total, there were 737,689 events reported in VAERS for COVID-19 vaccines in 2021, representing a shocking 93% of the total cases reported for any vaccine that same year. While we recognize that some of the COVID-19 vaccines are based on DNA vector technology rather than mRNA technology, this class (i.e., the Johnson & Johnson vaccine)

represents less than 9% of the COVID-19 reports, and its reaction profile is surely much more similar to that of the mRNA vaccines than to that of all the other vaccines.

The total number of adverse event reports for COVID-19 injections is far greater than the cumulative number of annual vaccine adverse event reports combined in all prior years, as shown by Rose (2021). The influenza vaccine is a good one to compare against. Given that the protocol for the mRNA vaccines requires two doses, and that many were persuaded to receive a booster shot as well, it is clear that the sheer number of COVID-19 vaccines administered is large compared to other vaccines. We can actually estimate what percent of the adverse reactions in 2021 would be expected to be associated with COVID-19 vaccines if the likelihood of an adverse reaction were similar to that of the influenza vaccine. The CDC tells us that 52% of the US population received a flu shot in 2021. The USAFacts web site provides percentages of the US population that received one, two or three doses of COVID-19 vaccines as a function of time (see: <https://usafacts.org/visualizations/covid-vaccine-tracker-states/>). The numbers they report for December 30, 2021 are 73% single dose, 62% fully vaccinated, and 21% boosted. This tallies up to 156% of the population as the total number of COVID-19 vaccines administered. This is exactly three times as many COVID vaccines as flu shots.

From VAERS, one can easily obtain the total number of adverse reactions associated with COVID-19 vaccines, the total number associated with flu vaccines, and the total number associated with all vaccines, for the US-restricted VAERS data from 2021. These come out as: COVID-19: 737,587, FLU: 9,124, and ALL: 792,935. First, we can observe that 93% of all the events reported were linked to COVID-19 vaccines. If we remove the counts for COVID-19 and replace them with three times the counts for flu (since COVID-19 vaccines were administered three times as often), we find that COVID-19 should have accounted for 32.6% of all the events, which can be compared with the actual result, which is 93%. We can also conclude that any event that shows up more than 93% as often for COVID-19 vaccines as for all other vaccines is especially significant as a potential toxic effect of these vaccines. Finally, we find that there are 27 times as many reports for COVID-19 vaccines as would be expected if its adverse reactions were comparable to those from the flu vaccine.

Table 1
Number of symptoms reported in VAERS, restricted to the US population, for the year 2021, for various adverse effects that could be caused by inflammation in associated major nerves, showing total counts for COVID-19 vaccines and for all vaccines.

Symptom	Inflamed Nerve(s)	Covid-19 Vaccines	All Vaccines	Percent COVID-19
Anosmia	olfactory nerve	3,657	3,677	99.5
Tinnitus	vestibulo-cochlear nerve	13,275	13,522	98.2
Deafness	cochlea	2,895	3,033	95.5
Bell's Palsy/ facial palsy	facial nerve	5,881	6,129	96.0
Vertigo	vestibular nerve	7,638	7,819	97.7
Migraine headache	trigeminal nerve	8,872	9,059	97.9
Dysphonia	glossopharyngeal nerve	1,692	1,751	96.6
Dysphagia	several lower cranial nerves	4,711	4,835	97.4
Nausea	vagus nerve	69,121	71,275	97.0
Vomiting	vagus nerve	27,885	28,955	96.3
Dyspnea	vagus nerve	39,551	40,387	97.9
Syncope	vagus nerve	14,701	15,268	96.3
Bradycardia	vagus nerve	673	699	96.3
TOTAL	-	200,552	206,409	97.2

15.1. VAERS data indicative of nerve damage and vagus nerve involvement

Table 1 lists a number of symptoms in VAERS that can be associated with inflammation of or damage to various major nerves of the body, particularly those in the head. Strikingly, COVID-19 vaccines represented from 96 to 98% of the reports in the year 2021 related to each of these debilitating conditions. There were nearly 100,000 cases of nausea or vomiting, which are common symptoms of vagus nerve stimulation or damage (Babic and Browning, 2014). 14,701 cases of syncope linked to COVID-19 vaccines represented 96.3% of all cases of syncope, a well-established feature of vagus nerve dysfunction (Fenton et al., 2000). There were 3,657 cases of anosmia (loss of smell), clearly demonstrating that the SARS-CoV-2 spike glycoprotein from the injection in the arm was reaching the olfactory nerve. Dyspnea (shortness of breath) is related to vagus nerve impairment in the lungs, and there were 39,551 cases of dyspnea connected to COVID-19 vaccines in 2021.

Altogether, these events add up to a total of over 200,000 events, representing 97.2% of all the entries related to any vaccine in 2021. This is also a substantial 27.2% of all the events listed for 2021 in association with COVID-19 vaccines.

15.2. VAERS data on the heart and liver

In this paper, we have identified both the heart and the liver as organs that can be expected to be affected by the mRNA vaccines. The VAERS database shows a strong signal for both organs. Table 2 shows the statistics for 2021 on major disorders of the heart, including myocarditis, arrest (cardiac, cardiorespiratory and sinus arrest), arrhythmia (including supraventricular, nodal, sinus, tachyarrhythmia and ventricular arrhythmia), myocardial infarction (including acute and silent), and cardiac failure (including acute, chronic and congestive). Altogether, there were a total of 8,090 COVID-19 events related to these heart conditions, representing nearly 98% of all the events for all the vaccines for these symptoms in 2021.

It is difficult to find all of the symptoms associated with liver damage in VAERS, but we selected a number that had high enough counts to be of interest and that clearly represent serious liver problems. Altogether there were 731 events in these categories for COVID-19 vaccines, as shown in Table 3, representing over 97% of all the cases connecting these conditions to any vaccine in 2021.

15.3. VAERS data related to thrombosis

There were 78 unique symptoms in VAERS involving thrombosis, specifying different arteries and veins. Table 4 shows nine symptoms with the highest counts, totaling 7,356 events. We investigated the time interval for the three dominant ones (thrombosis, deep vein thrombosis and pulmonary thrombosis), and found that these all have a sharp peak in the 15-30-day range for onset interval (time after vaccination). This coincides with a sharp peak in pulmonary embolism, a life-threatening condition, also in the 15-30-day time interval. Overall, for these nine thrombotic symptoms, a random sampling from the year 2021 would yield a COVID vaccine as opposed to any other vaccine 98.7% of the

Table 2

Number of symptoms reported in VAERS, restricted to the US population, for the year 2021, for various disorders of the heart, showing total counts for COVID-19 vaccines and for all vaccines.

Symptom	Covid-19 Vaccines	All Vaccines	Percent COVID-19
Myocarditis	2,322	2,361	98.3
Arrest	1,319	1,371	96.2
Arrhythmia	1,069	1,087	98.3
Myocardial infarction	2,224	2,272	97.9
Cardiac failure	1,156	1,190	97.1
TOTAL	8,090	8,281	97.7

Table 3

Number of symptoms reported in VAERS, restricted to the US population, for the year 2021, for various indicators of liver disease, showing total counts for COVID-19 vaccines and for all vaccines.

Symptom	Covid-19 Vaccines	All Vaccines	Percent COVID-19
Liver disorder	83	87	95.4
[Drug-induced] liver injury	65	65	100
[Acute] hepatic failure	86	88	97.7
Hepatic cancer [metastatic]	12	12	100
Hepatic cirrhosis	67	69	97.1
Hepatic cyst	33	34	97.0
Liver function test increased	238	245	97.1
Liver function test abnormal	90	94	95.7
Hepatic function abnormal	34	34	100
Haemangioma of liver	10	10	100
Liver abscess	7	7	100
Liver transplant	6	6	100
TOTAL	731	751	97.3

Table 4

Number of symptoms reported in VAERS, restricted to the US population, for the year 2021, for various specific types of thrombosis, showing total counts for COVID-19 vaccines and for all vaccines. Pulmonary embolism, a highly related symptom, is also shown.

Symptom	Covid-19 Vaccines	All Vaccines	Percent COVID-19
Thrombosis	3,899	3,951	98.7
Deep vein thrombosis	2,275	2,297	99.0
Pulmonary thrombosis	631	646	97.7
Cerebral thrombosis	211	215	98.1
Portal vein thrombosis	89	90	98.9
Superficial vein thrombosis	81	81	100
Peripheral artery thrombosis	74	74	100
Mesenteric vein thrombosis	55	56	98.2
Venous thrombosis	41	41	100
TOTAL	7,356	7,451	98.7
Pulmonary embolism	3,100	3,137	98.8

time. Pulmonary embolism, a life-threatening condition that can be caused by a blood clot that travels to the lungs, has a slightly higher probability of 98.8%, with 3,100 cases listed for COVID-19.

15.4. VAERS data related to neurodegenerative disease

Table 5 lists results for several conditions that are linked to neurodegenerative disease. Decreased mobility can be caused by Parkinson's disease, and there were a striking 8,975 cases listed for 2021 and COVID-19 vaccines. Alzheimer's and Parkinson's are diseases that normally

Table 5

Number of symptoms reported in VAERS, restricted to the US population, for the year 2021, for various disorders linked to neurodegenerative disease, showing total counts for COVID-19 vaccines and for all vaccines.

Symptom	Covid-19 Vaccines	All Vaccines	Percent COVID-19
Alzheimer's dementia	37	39	94.9
Parkinsonian symptoms	83	89	93.3
Memory impairment	1,681	1,720	97.7
Anosmia	3,657	3,677	99.5
Mobility decreased	8,975	9,743	92.1
Cognitive disorder	779	815	92.1
TOTAL	15,212	16,083	94.6

take decades to develop, and ordinarily one would assume that a vaccine has nothing to do with it. While the numbers are small, most of the cases in VAERS were linked to COVID-19 vaccines. Anosmia, also included in the table on the vagus nerve, is especially interesting, because it is a well-known early sign of Parkinson's disease, and it is also a well-identified feature of SARS-CoV-2 infection. 99.5% of the cases with anosmia as a symptom were linked to COVID-19 vaccines. Overall, the symptoms in this table were linked to COVID-19 vaccines nearly 95% of the time.

15.5. VAERS signal for cancer

Cancer is a disease generally understood to take months or, more commonly, years to progress from an initial malignant transformation in a cell to development of a clinically recognized condition. Since VAERS reports of adverse events are happening primarily within the first month or even the first few days after vaccination (Rose, 2021), it seems likely that the acceleration of cancer progression following vaccines would be a difficult signal to recognize. Furthermore, most people do not expect cancer to be an adverse event that could be caused by a vaccine, and hence they fail to enter a report when cancer develops shortly after vaccination. However, as we have outlined in our paper, if the mRNA vaccinations are leading to widespread dysregulation of oncogene controls, cell cycle regulation, and apoptosis, then VAERS reports should reflect an increase in reports of cancer, relative to the other vaccines, even if the numbers are small. The experiment demonstrating impairment of DNA repair mechanisms by SARS-CoV-2 spike protein in an *in vitro* study provides compelling evidence that the vaccines could accelerate the rate of DNA mutations, increasing cancer risk (Jiang and Mei, 2021).

For our analysis of evidence of increased cancer risk in VAERS, we focused on two somewhat distinct approaches. One, represented by the results in Table 6, was to gather the counts for any terms that contained keywords clearly linked to cancer, namely, "cancer," "lymphoma," "leukaemia," "metastasis," "carcinoma," and "neoplasm." Overall, we found 1,474 entries linking these terms to COVID-19 vaccines, representing 96% of all the entries for any of these terms for any vaccine in that year.

The complementary approach was to find terms involving cancer in specific organs, namely, breasts, prostate, bladder, colon, brain, lungs, pancreas and ovaries, as shown in Table 7. Although all the numbers are small, the highest by far was for breast cancer (246 cases), with nearly four times as many hits as for lung cancer, the second most common type. All of the cases for pancreatic, ovarian and bladder cancer were linked to COVID-19 vaccines, with zero cases for any other vaccine. Altogether, we tabulated 534 cases of cancer of specific organs linked to COVID-19 vaccines, representing 97.3% of all the cases for any vaccine in 2021.

Table 6

Number of symptoms reported in VAERS, restricted to the US population, for the year 2021, for various cancer-related terms, showing total counts for COVID-19 vaccines and for all vaccines.

Symptom	Counts COVID-19 vaccines	Counts All Vaccines	Percent COVID-19
Cancer	396	403	98.3
Lymphoma	144	153	94.1
Leukaemia	155	161	96.3
Metastatic/ metastasis	175	179	97.8
Carcinoma	176	187	94.1
Neoplasm	428	452	94.7
TOTAL	1,474	1,535	96.0

Table 7

Number of symptoms reported in VAERS, restricted to the US population, for the year 2021, for cancer of specific organs, showing total counts for COVID-19 vaccines and for all vaccines.

Symptom	Counts COVID-19 vaccines	Counts All Vaccines	Percent COVID-19
Breast cancer	246	254	96.8
Prostate cancer	50	52	96.2
Bladder cancer	30	30	100
Colon cancer	40	41	97.6
Brain neoplasm	53	55	96.4
Lung cancer	64	66	97.0
Pancreatic cancer	24	24	100
Ovarian cancer	27	27	100
Total	534	549	97.3

16. Conclusions

There has been an unwavering message about the safety and efficacy of mRNA vaccinations against SARS-CoV-2 from the public health apparatus in the US and around the globe. The efficacy is increasingly in doubt, as shown in a recent letter to the Lancet Regional Health by Günter Kampf (2021b). Kampf provided data showing that the vaccinated are now as likely as the unvaccinated to spread disease. He concluded: "It appears to be grossly negligent to ignore the vaccinated population as a possible and relevant source of transmission when deciding about public health control measures." Moreover, the inadequacy of phase I, II, and III trials to evaluate mid-term and long-term side effects from mRNA genetic vaccines may have been misleading on their suppressive impact on the innate immunity of the vaccinees.

In this paper, we call attention to three very important aspects of the safety profile of these vaccinations. First is the extensively documented subversion of innate immunity, primarily via suppression of IFN- α and its associated signaling cascade. This suppression will have a wide range of consequences, not the least of which include the reactivation of latent viral infections and the reduced ability to effectively combat future infections. Second is the dysregulation of the system for both preventing and detecting genetically driven malignant transformation within cells and the consequent potential for vaccination to promote those transformations. Third, mRNA vaccination potentially disrupts intracellular communication carried out by exosomes, and induces cells taking up spike glycoprotein mRNA to produce high levels of spike-glycoprotein-carrying exosomes, with potentially serious inflammatory consequences. Should any of these potentials be fully realized, the impact on billions of people around the world could be enormous and could contribute to both the short-term and long-term disease burden our health care system faces.

Given the current rapidly expanding awareness of the multiple roles of G4s in regulation of mRNA translation and clearance through stress granules, the increase in pG4s due to enrichment of GC content as a consequence of codon optimization has unknown but likely far-reaching consequences. Specific analytical evaluation of the safety of these constructs in vaccines is urgently needed, including mass spectrometry for identification of cryptic expression and immunoprecipitation studies to evaluate the potential for disturbance of or interference with the essential activities of RNA and DNA binding proteins.

It is essential that further studies be conducted to determine the extent of the potential pathological consequences outlined in this paper. It is not practical for these vaccinations to be considered part of a public health campaign without a detailed analysis of the human impact of the potential collateral damage. VAERS and other monitoring systems should be optimized to detect signals related to the health consequences of mRNA vaccination we have outlined. We believe the upgraded VAERS monitoring system described in the Harvard Pilgrim Health Care, Inc. study, but unfortunately not supported by the CDC, would be a valuable start in this regard (Lazarus et al., 2010).

In the end, billions of lives are potentially at risk, given the large number of individuals injected with the SARS-CoV-2 mRNA vaccines and the broad range of adverse outcomes we have described. We call on the public health institutions to demonstrate, with evidence, why the issues discussed in this paper are not relevant to public health, or to acknowledge that they are and to act accordingly. Furthermore, we encourage all individuals to make their own health care decisions with this information as a contributing factor in those decisions.

Author contributions

S.S., G.N and A.K. all contributed substantially to the writing of the original draft. P.M. participated in the process of editorial revisions.

Funding

This research was funded in part by Quanta Computers, Inc., Taipei, Taiwan, under the auspices of the Qmulus project.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

- Abe, M., Bonini, N.M., 2013. MicroRNAs and neurodegeneration: role and impact. *Trends Cell Biol.* 23 (1), 30–36. <https://doi.org/10.1016/j.tcb.2012.08.013>.
- Agashe, D., Martinez-Gomez, N.C., Drummond, D.A., Marx, C.J., 2013. Good codons, bad transcript: large reductions in gene expression and fitness arising from synonymous mutations in a key enzyme. *Mol. Biol. Evol.* 30, 549–560. <https://doi.org/10.1093/molbev/mss273>.
- Akiyama, H., Kakiuchi, S., Rikitake, J., Matsuba, H., Sekinada, D., Kozuki, Y., Iwata, N., 2021. Immune thrombocytopenia associated with Pfizer-BioNTech's BNT162b2 mRNA COVID-19 vaccine. *IDCases* 25, e01245. <https://doi.org/10.1016/j.idcr.2021.e01245>.
- Al-Khalaf, H.H., Aboussekhra, A., 2018. p16 controls p53 protein expression through miR-dependent destabilization of MDM2. *Mol. Cancer Res.* 16 (8), 1299–1308. <https://doi.org/10.1158/1541-7786.MCR-18-0017>.
- Alsamman, K., El-Masry, O.S., 2018. Interferon regulatory factor 1 inactivation in human cancer. *Biosci. Rep.* 38 (3), BSR20171672 <https://doi.org/10.1042/BSR20171672>, 2018.
- Andries, O., Mc Cafferty, S., De Smedt, S.C., Weiss, R., Sanders, N.N., Kitada, T., 2015. N1-methylpseudouridine-incorporated mRNA outperforms pseudouridine-incorporated mRNA by providing enhanced protein expression and reduced immunogenicity in mammalian cell lines and mice. *J. Contr. Release* 217, 337–344. <https://doi.org/10.1016/j.jconrel.2015.08.051>.
- Asmana Ningrum, R., 2014. Human interferon α -2b: a therapeutic protein for cancer treatment. *Sci. Tech. Rep.*, 970315 <https://doi.org/10.1155/2014/970315>, 2014.
- Atoui, A., Jarrah, K., Al Mahmasani, L., Bou-Fakhredin, R., Taher, A.T., 2022. Deep venous thrombosis and pulmonary embolism after COVID-19 mRNA vaccination. *Ann. Hematol.* 1–3. <https://doi.org/10.1007/s00277-021-04743-1> [Epub ahead of print].
- Avolio, E., Gamez, M., Gupta, K., Foster, R., Berger, I., Caputo, M., Davidson, A., Hill, B., Madeddu, P., 2020. The SARS-CoV-2 spike protein disrupts the cooperative function of human cardiac pericytes - endothelial cells through CD147 receptor-mediated signalling: a potential non-infective mechanism of COVID-19 microvascular disease. *bioRxiv preprint*. <https://doi.org/10.1101/2020.12.21.423721>. December 21.
- Babendure, J.R., Babendure, J.L., Ding, J.H., Tsien, R.Y., 2006. Control of mammalian translation by mRNA structure near caps. *RNA* 12 (5), 851–861. <https://doi.org/10.1261/rna.2309906>.
- Babic, T., Browning, K.N., 2014. The role of vagal neurocircuits in the regulation of nausea and vomiting. *Eur. J. Pharmacol.* 722, 38–47. <https://doi.org/10.1016/j.ejphar.2013.08.047>.
- Bahl, K., Senn, J.J., Yuzhakov, O., Bulychev, A., Brito, L.A., Hassett, K.J., Laska, M.E., Smith, M., Almarsson, Ö., Thompson, J., et al., 2017. Preclinical and clinical demonstration of immunogenicity by mRNA vaccines against H10N8 and H7N9 influenza viruses. *Mol. Ther.* 25 (6), 1316–1327. <https://doi.org/10.1016/j.ymthe.2017.03.035>.
- Bansal, S., Perincheri, S., Fleming, T., Poulson, C., Tiffany, B., Bremner, R.M., Mohanakumar, T., 2021. Cutting edge: circulating exosomes with COVID spike protein are induced by BNT162b2 (PfizerBioNTech) vaccination prior to development of antibodies: a novel mechanism for immune activation by mRNA vaccines. *J. Immunol.* 207 (10), 2405–2410. <https://doi.org/10.4049/jimmunol.2100637>.
- Barone, V., Camilli, F., Crisci, M., Scandellari, C., Barboni, P., Lugaresia, A., 2021. Inflammatory optic neuropathy following SARS-CoV-2 mRNA vaccine: description of two cases. *J. Neurol. Sci.* 429, 118186. <https://doi.org/10.1016/j.jns.2021.118186>.
- Bezzi, G., Piga, E.J., Binolfi, A., Armas, P., 2021. CNBP binds and unfolds in vitro G-quadruplexes formed in the SARS-CoV-2 positive and negative genome strands. *Int. J. Mol. Sci.* 22 (5), 2614. <https://doi.org/10.3390/ijms22052614>.
- Bhurani, V., Mohankrishnan, A., Morrot, A., Dalai, S.K., 2018. Developing effective vaccines: cues from natural infection. *Int. Rev. Immunol.* 37 (5), 249–265. <https://doi.org/10.1080/08830185.2018.1471479>.
- Bidwell, B.N., Slaney, C.Y., Withana, N.P., Forster, S., Cao, Y., Loi, S., Andrews, D., Mikeska, T., Mangan, N.E., Samarajiva, S.A., et al., 2012. Silencing of Irf7 pathways in breast cancer cells promotes bone metastasis through immune escape. *Nat. Med.* 18 (8), 1224–1231. <https://doi.org/10.1038/nm.2830>.
- Blanco-Melo, D., Nilsson-Payant, B.E., Liu, W.C., Uhl, S., Hoagland, D., Moller, R., Jordan, T.X., Oishi, K., Panis, M., Sachs, D., et al., 2020. Imbalanced host response to SARS-CoV-2 drives development of COVID-19. *Cell* 181 (5), 1036–1045 e9.
- Borbolis, F., Syntichaki, P., 2015. Cytoplasmic mRNA turnover and ageing. *Mech. Ageing Dev.* 152, 32–42. <https://doi.org/10.1016/j.mad.2015.09.006>.
- Brosh-Nissimov, T., Orenbuch-Harroch, E., Chowers, M., Elbaz, M., Neshler, L., Stein, M., Maor, Y., Cohen, R., Hussein, K., Weinberger, M., et al., 2021. BNT162b2 vaccine breakthrough: clinical characteristics of 152 fully vaccinated hospitalized COVID-19 patients in Israel. *Clin. Microbiol. Infect.* 27 (11), 1652–1657. <https://doi.org/10.1016/j.cmi.2021.06.036>.
- Buckley, N.E., Hosey, A.M., Gorski, J.J., Purcell, J.W., Mulligan, J.M., Harkin, D.P., Mullan, P.B., 2007. BRCA1 regulates IFN- γ signaling through a mechanism involving the type I IFNs. *Mol. Cancer Res.* 5 (3), 261–270. <https://doi.org/10.1158/1541-7786.MCR-06-0250>.
- Cancer risk and BRCA1 gene mutations. Available at: <https://www.facingourrisk.org/info/hereditary-cancer-and-genetic-testing/hereditary-cancer-genes-and-risk/genes-by-name/brca1/cancer-risk->. (Accessed 27 November 2021).
- Centers for Disease Control and Prevention, 2021a. Coronavirus Disease 2019 (COVID-19) [online] Available at: https://www.cdc.gov/coronavirus/2019-ncov/science/science-briefs/vaccine-induced-immunity.html#anchor_1635540449320. (Accessed 28 November 2021).
- Centers for Disease Control and Prevention, 2021b. COVID-19 Booster Shot [online] Available at: <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/booster-shot.html>. (Accessed 28 November 2021).
- Chahar, H.S., Bao, X., Casola, A., 2015. Exosomes and their role in the life cycle and pathogenesis of RNA viruses. *Viruses* 7, 3204–3225. <https://doi.org/10.3390/v7062770>.
- Chan, K.L., Peng, B., Umar, M.I., Chan, C.Y., Sahakyan, A.B., Le, M.T.N., Kwok, C.K., 2018. Structural analysis reveals the formation and role of RNA G-quadruplex structures in human mature microRNAs. *Chem. Commun.* 54 (77), 10878–10881. <https://doi.org/10.1039/c8cc04635b>.
- Chaudhary, N., Weissman, D., Whitehead, K.A., 2021. mRNA vaccines for infectious diseases: principles, delivery and clinical translation. *Nat. Rev. Drug Discov.* 20, 817–838. <https://doi.org/10.1038/s41573-021-00283-5>.
- Chauvineau-Grenier, A., Bastard, P., Servajean, A., Gervais, A., Rosain, J., Jouanguy, E., Cobat, A., Casanova, J.-L., Rossi, B., 2022. Autoantibodies neutralizing type I interferons in 20% of COVID-19 deaths in a French hospital. *January J. Clin. Immunol.* 27. <https://doi.org/10.1007/s10875-021-01203-3> [Epub ahead of print].
- Choi, H.S., Lee, H.M., Jang, Y.-J., Kim, C.-H., Ryua, C.J., 2013. Heterogeneous nuclear ribonucleoprotein A2/B1 regulates the self-renewal and pluripotency of human embryonic stem cells via the control of the G1/S transition. *Stem Cell.* 31, 2647–2658. <https://doi.org/10.1002/stem.1366>.
- Choi, Y.E., Pan, Y., Park, E., Konstantinopoulos, P., De, S., D'Andrea, A., Chowdhury, D., 2014. MicroRNAs downregulate homologous recombination in the G1 phase of cycling cells to maintain genomic stability. *Elife* 3, e02445. <https://doi.org/10.7554/eLife.02445>.
- Choi, S., Lee, S., Seo, J.-W., Kim, M.-J., Jeon, Y.H., Park, J.H., Lee, J.K., Yeo, N.S., 2021. Myocarditis-induced sudden death after BNT162b2 mRNA COVID-19 vaccination in Korea: case report focusing on histopathological findings. *J. Kor. Med. Sci.* 36 (40), e286. <https://doi.org/10.3346/jkms.2021.36.e286>.
- Cines, D.B., Bussell, J.B., 2021. SARS-CoV-2 vaccine-induced immune thrombotic thrombocytopenia. *N. Engl. J. Med.* 384, 2254–2256. <https://doi.org/10.1056/NEJMe2106315>.
- Collier, D.A., De Marco, A., Ferreira, I.A.T.M., Meng, B., Datir, R.P., Walls, A.C., et al., 2021. Sensitivity of SARS-CoV-2 B.1.1.7 to mRNA vaccine-elicited antibodies. *Nature* 593, 136–141. <https://doi.org/10.1038/s41586-021-03412-7>.
- Consoli, S., Dono, F., Evangelista, G., D'Apolito, M., Travaglini, D., Onofri, M., Bonanni, L., 2021. Status migrainosus: a potential adverse reaction to Comirnaty (BNT162b2, BioNTech/Pfizer) COVID-19 vaccine case report [Epub ahead of print] *Neurol. Sci.* 22, 1–4. <https://doi.org/10.1007/s10072-021-05741-x>. Nov.
- Créange, A., 2000. A role for interferon-beta in Guillain-Barré Syndrome? *BioDrugs* 14 (1), 1–11. <https://doi.org/10.2165/00063030-200014010-00001>.
- Crow, A.R., Lazarus, A.H., 2003. Role of Fc γ receptors in the pathogenesis and treatment of idiopathic thrombocytopenic purpura. *J. Pediatr. Hematol. Oncol.* 25 (Suppl. 1), S14S18. <https://doi.org/10.1097/00043426-200312001-00004>.
- Danese, E., Montagnana, M., Salvagno, G.L., Peserico, D., Pighi, L., De Nitto, S., Henry, B.M., Porru, S., Lippi, G., 2021. Comprehensive assessment of humoral response after Pfizer BNT162b2 mRNA Covid-19 vaccination: a three-case series. *Clin. Chem. Lab. Med.* 59 (9), 1585–1591. <https://doi.org/10.1515/cclm-2021-0339>.
- De Andrea, M., Ravera, R., Gioia, D., Gariglio, M., Landolfo, S., 2002. The interferon system: an overview. *Eur. J. Paediatr. Neurol.* 6, A41–A46. <https://doi.org/10.1053/ejpn.2002.0573>.

- de Beuckelaer, A., Pollard, C., Van Lint, S., Roose, K., Van Hoecke, L.V., Naessens, T., Udhayakumar, V.K., Smet, M., Sanders, N., Lienenklaus, S., et al., 2016. Type I interferons interfere with the capacity of mRNA lipoplex vaccines to elicit cytolytic T cell responses. *Mol. Ther.* 24 (11), 2012–2020. <https://doi.org/10.1038/mt.2016.161>.
- de Gonzalo-Calvo, D., Benítez, I.D., Pinilla, L., Carratalá, A., Moncusí-Moix, A., Gort-Paniello, C., Molinero, M., González, J., Torres, G., Bernal, M., et al., 2021. Circulating microRNA profiles predict the severity of COVID-19 in hospitalized patients. *Transl. Res.* 236, 147–159. <https://doi.org/10.1016/j.trsl.2021.05.004>.
- De Paolis, V., Lorefice, E., Orecchini, E., Carissimi, C., Laudadio, F., Fulci, V., 2021. Epitranscriptomics: a new layer of microRNA regulation in cancer. *Cancers* 13 (13), 3372. <https://doi.org/10.3390/cancers13133372>.
- Decker, C.J., Parker, R., 2012. P-bodies and stress granules: possible roles in the control of translation and mRNA degradation. *Cold Spring Harbor Perspect. Biol.* 4 (9), a012286. <https://doi.org/10.1101/cshperspect.a012286>.
- Delannoy, A.S., Hober, D., Bouzidi, A., Watter, P., 1999. Role of interferon alpha (IFN- α) and interferon gamma (IFN- γ) in the control of the infection of monocyte-like cells with Human Cytomegalovirus (HCMV). *Microbiol. Immunol.* 43 (12), 1087–1096.
- Dodick, D., Silberstein, S., 2006. Central sensitization theory of migraine: clinical implications. *Headache* 46 (Suppl. 4), S18291. <https://doi.org/10.1111/j.1526-4610.2006.00602.x>.
- Doulberis, M., Papaefthymiou, A., Kotronis, G., Gialamproun, D., Soteriades, E.S., Kyriakopoulos, A., et al., 2021. Does COVID-19 vaccination warrant the classical principle "ofelein i mi vlapint. *Medicina (Kaunas)*. 57 (3), 253. <https://doi.org/10.3390/medicina57030253>.
- Dumortiera, J., 2022. Liver injury after mRNA-based SARS-CoV-2 vaccination in a liver transplant recipient. *Clin. Res. Hepatol. Gastroenterol.* 46, 101743 <https://doi.org/10.1016/j.clinre.2021.101743>.
- Dunn, G.P., Bruce, A.T., Sheehan, K.C.F., Shankaran, V., Uppaluri, R., Bui, J.D., Diamond, M.S., Koebel, C.M., Arthur, C., White, J.M., et al., 2005. A critical function for type I interferons in cancer immunoeediting. *Nat. Immunol.* 6 (7), 722–729. <https://doi.org/10.1038/ni1213>.
- Erb, H.H., Langlechner, R.V., Moser, P.L., Handle, F., Casneuf, T., Verstraeten, K., Schlick, B., Schäfer, G., Hall, B., Sasser, K., Culig, Z., Santer, F.R., et al., 2013. IL6 sensitizes prostate cancer to the antiproliferative effect of IFN α 2 through IRF9. *Endocr. Relat. Cancer* 20 (5), 677. <https://doi.org/10.1530/ERC-13-0222>.
- Erman, A.B., Kejner, A.E., Norman, B.S., Hogikyan, D., Feldman, E.L., 2009. Disorders of cranial nerves IX and X. *Semin. Neurol.* 29 (1), 8592. <https://doi.org/10.1055/s-0028-1124027>.
- Eviston, T., Croxson, G.R., Kennedy, P.G.E., Hadlock, T., Krishnan, A.V., 2015. Bell's palsy: aetiology, clinical features and multidisciplinary care. *J. Neurol. Neurosurg. Psychiatry* 86, 13561361. <https://doi.org/10.1136/jnnp-2014-309563>.
- Farazi, T.A., Hoell, J.I., Morozov, P., Tuschl, T., 2013. MicroRNAs in human cancer. *Adv. Exp. Med. Biol.* 774, 1–20. https://doi.org/10.1007/978-94-007-5590-1_1.
- Fathy, R.A., McMahon, D.E., Lee, C., Chamberlin, G.C., Rosenbach, M., Lipoff, J.B., Tyagi, A., Desai, S.R., French, L.E., Lim, H.W., et al., 2022. Varicella-zoster and herpes simplex virus reactivation post-COVID-19 vaccination: a review of 40 cases in an International Dermatology Registry. *JEADV* 36 (1), e6–e9. <https://doi.org/10.1111/jdv.17646>.
- Fay, M.M., Lyons, S.M., Ivanov, P., 2017. RNA G-quadruplexes in biology: principles and molecular mechanisms. *J. Mol. Biol.* 429 (14), 2127–2147. <https://doi.org/10.1016/j.jmb.2017.05.017>.
- FDA, 2021a. In: Vaccines and Related Biological Products Advisory Committee December 10, 2020 Meeting Announcement. <https://www.fda.gov/advisory-committees/advisory-committee-calendar/vaccines-and-related-biological-products-advisory-committee-december-10-2020-meeting-announcement>. (Accessed 29 March 2021).
- FDA, 2021b. In: Vaccines and Related Biological Products Advisory Committee December 17, 2020 Meeting Announcement. <https://www.fda.gov/advisory-committees/advisory-committee-calendar/vaccines-and-related-biological-products-advisory-committee-december-17-2020-meeting-announcement>. (Accessed 29 March 2021).
- Feng, B., Eknayan, G., Guo, Z.S., Jadoul, M., Rao, H.Y., Zhang, W., Wei, L., 2012. Effect of interferon- α -based antiviral therapy on hepatitis C virus-associated glomerulonephritis: a meta-analysis. *Nephrol. Dial. Transplant.* 27 (2), 640–646.
- Fenton, A.M., Hammill, S.C., Rea, R.F., Low, P.A., Shen, W.-K., 2000. Vasovagal syncope. *Ann. Intern. Med.* 133 (9), 714–725. <https://doi.org/10.7326/0003-4819-133-9-200011070-00014>.
- Finnberg, N.K., El-Deiry, W.S., 2008. TRAIL death receptors as tumor suppressors and drug targets. *Cell Cycle* 7 (11), 1525–1528. <https://doi.org/10.4161/cc.7.11.5975>.
- Forni, G., Mantovani, A., 2021. COVID-19 Commission of Accademia Nazionale dei Lincei, Rome. COVID-19 vaccines: where we stand and challenges ahead. *Cell Death Differ.* 28 (2), 626–639. <https://doi.org/10.1038/s41418-020-00720-9>.
- Garg, A., Seeliger, B., Derda, A.A., Xiao, K., Gietz, A., Scherf, K., Sonnenschein, K., Pink, I., Hoepfer, M.M., Welte, T., et al., 2021. Circulating cardiovascular microRNAs in critically ill COVID-19 patients. *Eur. J. Heart Fail.* 23 (3), 468–475. <https://doi.org/10.1002/ejhf.2096>.
- Gavras, I., Gavras, H., 2002. Angiotensin II as a cardiovascular risk factor. *J. Hum. Hypertens.* 16 (Suppl. 2), S2–S6. <https://doi.org/10.1038/sj.jhh.1001392>.
- Girardi, T., De Keersmaecker, K., 2015. T-ALL: ALL a matter of translation? *Haematologica* 100 (3), 293–295. <https://doi.org/10.3324/haematol.2014.118562>.
- Goldman, S., Bron, D., Tousseyn, T., Vierasu, I., Dewispelaere, L., Heimann, P., Cogan, E., Goldman, M., 2021. Rapid progression of angioimmunoblastic T cell lymphoma following BNT162b2 mRNA vaccine booster shot: a case report. *Front. Med.* 8, 798095 <https://doi.org/10.3389/fmed.2021.798095>.
- Gordon, D.E., Hiatt, J., Bouhaddou, M., Rezelj, V.V., Ulferts, S., Braberg, H., et al., 2020. Comparative host-coronavirus protein interaction networks reveal pan-viral disease mechanisms. *Science* 370 (6521), eabe9403. <https://doi.org/10.1126/science.abe9403>.
- Gould, F.D.H., Lammers, A.R., Mayer, C.J., German, R.Z., 2019. Specific vagus nerve lesion have distinctive physiologic mechanisms of dysphagia. *Front. Neurol.* 10, 1301. <https://doi.org/10.3389/fneur.2019.01301>.
- Guo, X., Namekata, K., Kimura, A., Harada, C., Harada, T., 2017. The renin-angiotensin system regulates neurodegeneration in a mouse model of optic neuritis. *Am. J. Pathol.* 187 (12), 2876–2885. <https://doi.org/10.1016/j.ajpath.2017.08.012>.
- Hadjadj, J., Yatim, N., Barnabei, L., Corneau, A., Boussier, J., Smith, N., Péré, H., Charbit, B., Bondet, V., Chenevier-Gobeaux, C., et al., 2020. Impaired type I interferon activity and inflammatory responses in severe COVID-19 patients. *Science* 369 (6504), 718–724. <https://doi.org/10.1016/j.cell.2020.04.026>.
- Han, S.H., Choe, J., 2020. Diverse molecular functions of m6A mRNA modification in cancer. *Exp. Mol. Med.* 52 (5), 738–749. <https://doi.org/10.1038/s12276-020-0432-y>.
- Heise, R., Amann, P.M., Ensslen, S., Marquardt, Y., Czaja, K., Joussen, S., Beer, D., Abele, R., Plewnia, G., Tampé, R., et al., 2016. Interferon alpha signaling and its relevance for the upregulatory effect of transporter proteins associated with antigen processing (TAP) in patients with malignant melanoma. *PLoS One* 11 (1), e0146325. <https://doi.org/10.1371/journal.pone.0146325>.
- Herdy, B., Mayer, C., Varshney, D., Marsico, G., Murat, P., Taylor, C., D'Santos, C., Tannahill, D., Balasubramanian, S., 2018. Analysis of NRAS RNA G-quadruplex binding proteins reveals DDX3X as a novel interactor of cellular G-quadruplex containing transcripts. *Nucleic Acids Res.* 46 (21), 11592–11604. <https://doi.org/10.1093/nar/gky861>.
- Hoagland, D.A., Möller, R., Uhl, S.A., Oishi, K., Frere, J., Golyner, T., Horiuchi, S., Panis, M., Blanco-Melo, D., Sachs, D., et al., 2021. Leveraging the antiviral type I interferon system as a first line of defense against SARS-CoV-2 pathogenicity. *Immunity* 54, 557570. <https://doi.org/10.1016/j.immuni.2021.01.017>.
- Honda, K., Takaoka, A., Taniguchi, T., 2006. Type I interferon [corrected] gene induction by the interferon regulatory factor family of transcription factors. *Immunity* 25 (3), 349–360. <https://doi.org/10.1016/j.immuni.2006.08.009>.
- Honke, K., 2013. Biosynthesis and biological function of sulfolipolipids. *Proc. Jpn. Acad. Ser. B Phys. Biol. Sci.* 89 (4), 129138 <https://doi.org/10.2183/pjab.89.129>.
- Hou, X., Zaks, T., Langer, R., Dong, Y., 2021. Lipid nanoparticles for mRNA delivery. *Nat. Rev. Mater.* 6, 1078–1094. <https://doi.org/10.1038/s41578-021-00358-0>.
- Huang, Y., Cai, X., Song, X., Tang, H., Huang, Y., Xie, S., Hu, Y., 2013. Steroids for preventing recurrence of acute severe migraine headaches: a meta-analysis. *Eur. J. Neurol.* 20 (8), 1184–1190. <https://doi.org/10.1111/ene.12155>.
- Huang, F.T., Sun, J., Zhang, L., He, X., Zhu, Y.H., Dong, H.J., Wang, H.-Y., Zhu, L., Zou Huang, J.W., et al., 2019. Role of SIRT1 in hematologic malignancies. *J. Zhejiang Univ. - Sci. B* 20 (5), 391–398. <https://doi.org/10.1631/jzus.B1900148>.
- Ilyas, A.A., Mithen, F.A., Dalakas, M.C., Wargo, M., Chen, Z.W., Biology, L., Cook, S.D., 1991. Antibodies to sulfated glycolipids in Guillain-Barré syndrome. *J. Neurol. Sci.* 105 (1), 108–117. [https://doi.org/10.1016/0022-510x\(91\)90126-r](https://doi.org/10.1016/0022-510x(91)90126-r).
- Ivanova, E.N., Devlin, J.C., Buus, T.B., Koide, A., Cornelius, A., Samanovic, M.I., Herrera, A., Zhang, C., Desvignes, L., Odum, N., Ulrich, R., Mulligan, M.J., Koide, S., Ruggles, K.V., Herati, R.S., Korolov, S.B., 2021. Discrete immune response signature to SARS-CoV-2 mRNA vaccination versus infection. *medRxiv preprint*. <https://doi.org/10.1101/2021.04.20.21255677>. April 21.
- Iwanaga, J., Fukuoka, H., Fukuoka, N., Yutori, H., Ibaragi, S., Tubbs, R.S., 2021. A narrative review and clinical anatomy of Herpes zoster infection following COVID-19 vaccination. *Clin. Anat.* 35 (1), 45–51. <https://doi.org/10.1002/ca.23790>.
- Jain, S.S., Steele, J.M., Fonseca, B., Huang, S., Shah, S., Maskatia, S.A., Buddhe, S., Misra, N., Ramachandran, P., Gaur, L., et al., 2021. COVID-19 vaccination-associated myocarditis in adolescents. *Pediatrics* 148 (5), e2021053427. <https://doi.org/10.1542/peds.2021-053427>.
- Janeway Jr., C.A., Medzhitov, R., 2002. Innate immune recognition. *Annu. Rev. Immunol.* 20, 197–216. <https://doi.org/10.1146/annurev.immunol.20.083001.084359>.
- Jang, S.K., Pestova, T.V., Hellen, C.U.T., Witherell, G.W., Wimmer, E., 1990. Cap-independent translation of picornavirus RNAs: structure and function of the internal ribosomal entry site. *Enzyme* 44, 292–309. <https://doi.org/10.1015/000468766>.
- Jaubert, C., Bedrat, A., Bartolucci, L., Di Primo, C., Ventura, M., Mergny, J.-L., Amrane, S., Andreola, M.-L., 2018. RNA synthesis is modulated by G-quadruplex formation in Hepatitis C virus negative RNA strand. *Sci. Rep.* 8, 8120. <https://doi.org/10.1038/s41598-018-26582-3>.
- Jego, G.A., Palucka, K., Blanck, J.-P., Chalouni, C., Pascual, V., Banchereau, J., 2003. Plasmacytoid dendritic cells induce plasma cell differentiation through type I interferon and interleukin 6. *Immunity* 19, 225234. [https://doi.org/10.1016/s1074-7613\(03\)00208-5](https://doi.org/10.1016/s1074-7613(03)00208-5).
- Jeong, M., Ocwieja, K.E., Han, D., Wackym, P.A., Zhang, Y., Brown, A., Moncada, C., Vambutas, A., Kanne, T., Crain, R., et al., 2021. Direct SARS-CoV-2 infection of the human inner ear may underlie COVID-19-associated audiovestibular dysfunction. *Commun. Med.* 1, 44. <https://doi.org/10.1038/s43856-021-00044-w>.
- Jhaveri, R., 2021. The COVID-19 mRNA vaccines and the pandemic: do they represent the beginning of the end or the end of the beginning? *Clin. Therapeut.* 43 (3), 549–556. <https://doi.org/10.1016/j.clinthera.2021.01.014>.
- Jiang, H., Mei, Y.-F., 2021. SARS-CoV-2 spike impairs DNA damage repair and inhibits V (DJ) recombination in vitro. *Viruses* 13 (2056). <https://doi.org/10.3390/v13102056>.
- Kaczmarek, R., El Ekiaby, M., Hart, D.P., Hermans, C., Makris, M., Noone, D., O'Mahony, B., Page, D., Peyvandi, F., Pipe, S.W., et al., 2021. Vaccination against COVID-19: rationale, modalities and precautions for patients with haemophilia and

- other inherited bleeding disorders. *Haemophilia* 27 (4), 515–518. <https://doi.org/10.1111/hae.14271>.
- Kakarougkas, A., Ismail, A., Klement, K., Goodarzi, A.A., Conrad, S., Freire, R., Shibata, A., Loblrich, M., Jeggo, P.A., 2013. Opposing roles for 53BP1 during homologous recombination. *Nucleic Acids Res.* 41 (21), 9719–9731. <https://doi.org/10.1093/nar/gkt729>.
- Kalra, R.S., Kandimalla, R., 2021. Engaging the spikes: heparan sulfate facilitates SARS-CoV-2 spike protein binding to ACE2 and potentiates viral infection. *Signal Transduct. Targeted Ther.* 6, 39. <https://doi.org/10.1038/s41392-021-00470-1>.
- Kampf, G., 2021a. The epidemiological relevance of the COVID-19-vaccinated population is increasing. *Lancet. Reg. Health – Europ.* 11, 100272 <https://doi.org/10.1016/j.lanepe.2021.100272>.
- Kampf, G., 2021b. The epidemiological relevance of the COVID-19-vaccinated population is increasing. *Lancet Reg. Health – Europ.* 11, 100272 <https://doi.org/10.1016/j.lanepe.2021.100272>.
- Karikó, K., Buckstein, M., Ni, H., Weissman, D., 2005. Suppression of RNA recognition by toll-like receptors: the impact of nucleoside modification and the evolutionary origin of RNA. *Immunity* 23, 165175. <https://doi.org/10.1016/j.immuni.2005.06.008>.
- Katalin Karikó, K., Muramatsu, H., Welsh, F.A., Ludwig, J., Kato, H., Akira, S., Weissman, D., 2008. Incorporation of pseudouridine into mRNA yields superior nonimmunogenic vector with increased translational capacity and biological stability. *Mol. Ther.* 16, 1833–1840. <https://doi.org/10.1038/mt.2008.200>.
- Katsikas Triantafyllidis, K., Giannos, P., Mian, I.T., Kyrtonis, G., Kechagias, K.S., 2021. Varicella zoster virus reactivation following COVID-19 vaccination: a systematic review of case reports. *Vaccines* 9 (9), 1013. <https://doi.org/10.3390/vaccines9091013>.
- Kaulen, L.D., Doubrovinskaja, S., Mooshage, C., Jordan, B., Purrucker, J., Haubner, C., Seliger, C., Lorenz, H.-M., Nagel, S., Wildemann, B., Bendszus, M., Wick, W., Schenberger, S., 2021. Neurological autoimmune diseases following vaccinations against SARS-CoV-2: a case series. *Eur. J. Neurol.* 1–9. <https://doi.org/10.1111/ene.15147> [Epub ahead of print].
- Kaur, A., Fang, C.M., 2020. An overview of the human immune system and the role of interferon regulatory factors (IRFs). *Prog. Microb. Mol. Biol.* 3 (1) <https://doi.org/10.36877/pmbb.a0000129>, 2020.
- Kelton, J.G., Arnold, D.M., Nazy, I., 2021. Lessons from vaccine-induced immune thrombotic thrombocytopenia. *Nat. Rev. Immunol.* 21 (12), 753–755. <https://doi.org/10.1038/s41577-021-00642-8>.
- Khayat-Khoei, M., Bhattacharyya, S., Katz, J., Harrison, D., Tauhid, S., Brusio, P., Houtchens, M.K., Edwards, K.R., Bakshi, R., 2021 Sep 4. COVID-19 mRNA vaccination leading to CNS inflammation: a case series. *J. Neurol.* 1–14. <https://doi.org/10.1007/s00415-021-10780-7> [Epub ahead of print].
- Kimura, T., Nakajima, T., Kamijo, Y., Tanaka, N., Wang, L., Hara, A., Sugiyama, E., Tanaka, E., Gonzalez, F.J., Aoyama, T., 2012. Hepatic cerebroside sulfotransferase is induced by PPAR activation in mice. *PPAR Res.* 174932 <https://doi.org/10.1155/2012/174932>, 2012.
- Knuckles, P., Bühler, M., 2018. Adenosine methylation as a molecular imprint defining the fate of RNA. *FEBS Lett.* 592 (17), 2845–2859. <https://doi.org/10.1002/1873-3468.13107>.
- Kolumam, G.A., Thomas, S., Thompson, L.J., Sprent, J., Murali-Krishna, K., 2005. Type I interferons act directly on CD8 T cells to allow clonal expansion and memory formation in response to viral infection. *J. Exp. Med.* 202 (5), 637650 <https://doi.org/10.1084/jem.20050821>.
- Koo, J.W., Russo, S.J., Ferguson, D., Nestler, E.J., Duman, R.S., 2010. Nuclear factor-kappaB is a critical mediator of stressor-induced neurogenesis and depressive behavior. *Proc. Natl. Acad. Sci. U. S. A.* 107 (6), 2669–2674. <https://doi.org/10.1073/pnas.0910658107>.
- Kothandan, V.K., Kothandan, S., Kim, D.H., Byun, Y., Lee, Y.-K., Park, I.-K., Hwang, S.R., 2020. Crosstalk between stress granules, exosomes, tumour antigens, and immune cells: significance for cancer immunity. *Vaccines* 8 (2), 172. <https://doi.org/10.3390/vaccines8020172>.
- Kudla, G., Lipinski, L., Caffin, F., Helwak, A., Zyllicz, M., 2006. High guanine and cytosine content increases mRNA levels in mammalian cells. *PLoS Biol.* 4 (6), e180 <https://doi.org/10.1371/journal.pbio.0040180>.
- Kuwahara, M., Kusunoki, S., 2018. Mechanism and spectrum of anti-glycolipid antibody-mediated chronic inflammatory demyelinating polyneuropathy. *Clin. Exper. Neuroimmunol.* 9 (1), 65–74. <https://doi.org/10.1111/cen3.12452>.
- Kwok, H.F., 2021. Review of COVID-19 vaccine clinical trials – A puzzle with missing pieces. *Int. J. Biol. Sci.* 7 (6), 1461.
- Kyriakopoulos, A.M., McCullough, P.A., 2021. Synthetic mRNAs; their analogue caps and contribution to disease. *Diseases* 9 (3), 57. <https://doi.org/10.3390/diseases9030057>.
- Lanz, T.V., Ding, Z., Ho, P.P., Luo, J., Agrawal, A.N., Srinagesh, H., Axtell, R., Zhang, H., Platten, M., Wyss-Coray, T., Steinman, L., 2010. Angiotensin II sustains brain inflammation in mice via TGF-beta. *J. Clin. Invest.* 120 (8), 2782–2794. <https://doi.org/10.1172/JCI41709>.
- Lazarus, R., Klompas, M., Bernstein, S., 2010. Electronic Support for Public Health–Vaccine Adverse Event Reporting System (ESP: VAERS). *Grant. Final Report, Grant ID: R18 HS, p. 17045*.
- Lee, E.-J., Cines, D.B., Gernsheimer, T., Kessler, C., Michel, M., Tarantino, M.D., Semple, J.W., Arnold, D.M., Godeau, B., Lambert, M.P., Bussell, J.B., 2021. Thrombocytopenia following Pfizer and Moderna SARS-CoV-2 vaccination. *Am. J. Hematol.* 96 (5), 534–537. <https://doi.org/10.1002/ajh.26132>.
- Lemberger, T., Staels, B., Saladin, R., Desvergne, B., Auwerx, J., Wahli, W., 1994. Regulation of the peroxisome proliferator-activated receptor alpha gene by glucocorticoids. *J. Biol. Chem.* 269 (40), 24527–24530. <https://doi.org/10.1093/toxsci/kfn260>.
- Lensen, R., Netea, M.G., Rosendaal, F.R., 2021. Hepatitis C virus reactivation following COVID-19 vaccination – A case report. *Int. Med. Case Rep. J.* 14, 573–575. <https://doi.org/10.2147/IMCRJ.S328482>.
- Letarov, A.V., Babenko, V.V., Kulikov, E.E., 2021. Free SARS-CoV-2 spike protein S1 particles may play a role in the pathogenesis of COVID-19 infection. *Biochemistry (Mosc.)* 86 (3), 257–261. <https://doi.org/10.1134/S0006297921030032>.
- Leung, D.W., Amarasinghe, G.K., 2016. When your cap matters: structural insights into self vs non-self recognition of 5' RNA by immunomodulatory host proteins. *Curr. Opin. Struct. Biol.* 36, 133–141. <https://doi.org/10.1016/j.sbi.2016.02.001>.
- Li, Y., Huang, R., Wang, L., Hao, J., Zhang, Q., Ling, R., Yun, J., 2015. Micro RNA-762 promotes breast cancer cell proliferation and invasion by targeting IRF7 expression. *Cell Prolif* 48 (6), 643–649. <https://doi.org/10.1111/cpr.12223>.
- Lindenmann, J., 1982. From interference to interferon: a brief historical introduction. *Philos. Trans. R. Soc. Lond. B Biol. Sci.* 299 (1094), 3–6.
- Liu, T., Khanna, K.M., Chen, X., Fink, D.J., Hendricks, R.L., 2000. CD8(+) T cells can block herpes simplex virus type 1 (HSV-1) reactivation from latency in sensory neurons. *J. Exp. Med.* 191 (9), 1459–1466. <https://doi.org/10.1084/jem.191.9.1459>.
- Liu, J., Wang, J., Xu, J., Xia, H., Wang, Y., Zhang, C., Chen, W., Zhang, H., Liu, Q., Zhu, R., et al., 2021. Comprehensive investigations revealed consistent pathophysiological alterations after vaccination with COVID-19 vaccines. *Cell Discov.* 7 (1), 99. <https://doi.org/10.1038/s41421-021-00329-3>.
- Lladó, I., Fernández-Bernáldez, A., Rodríguez-Jiménez, P., 2021. Varicella zoster virus reactivation and mRNA vaccines as a trigger. *JAAD. Case Rep.* 15, 62–63. <https://doi.org/10.1016/j.jcdr.2021.07.011>.
- Lu, Y., Harada, M., Kamijo, Y., Nakajima, T., Tanaka, N., Sugiyama, E., Kyogashima, M., Gonzalez, F.J., Aoyama, T., 2019. Peroxisome proliferator-activated receptor attenuates high-cholesterol diet-induced toxicity and pro-thrombotic effects in mice. *Arch. Toxicol.* 93 (1), 149161 <https://doi.org/10.1007/s00204-018-2335-4>.
- MacFarlane, M., Kohlhaas, S.L., Sutcliffe, M.J., Dyer, M.J., Cohen, G.M., 2005. TRAIL receptor-selective mutants signal to apoptosis via TRAIL-R1 in primary lymphoid malignancies. *Cancer Res.* 65 (24), 11265–11270. <https://doi.org/10.1158/0008-5472.CAN-05-2801>.
- Maleki, A., 2021. COVID-19 recombinant mRNA vaccines and serious ocular inflammatory side effects: real or coincidence? *J. Ophthalmic Vis. Res.* 16 (3), 490501 <https://doi.org/10.18502/jovr.v16i3.9443>.
- Mann, R., Sekhon, S., Sekhon, S., 2021. Drug-induced liver injury after COVID-19 vaccine. *Cureus* 13 (7), e16491. <https://doi.org/10.7759/cureus.16491>.
- Marcus, J., Honigbaum, S., Shroff, S., Honke, K., Rosenbluth, J., Dupree, J.L., 2006. Sulfatide is essential for the maintenance of CNS myelin and axon structure. *Glia* 53 (4), 372–381. <https://doi.org/10.1002/glia.20292>.
- Martini, P.G.V., Guey, L.T., 2019. A new era for rare genetic diseases: messenger RNA therapy. *Hum. Gene Ther.* 30 (10), 1180–1189. <https://doi.org/10.1089/hum.2019.090>.
- Matsuoka, M., Tani, K., Asano, S., 1998. Interferon-alpha-induced G1 phase arrest through upregulated expression of CDK inhibitors, p19Ink4D and p21Cip1 in mouse macrophages. *Oncogene* 16, 2075–2086. <https://doi.org/10.1038/sj.onc.1201745>.
- Mauro, V.P., Chappell, S.A., 2014. A critical analysis of codon optimization in human therapeutics. *Trends Mol. Med.* 20 (11), 604–613. <https://doi.org/10.1016/j.molmed.2014.09.003>.
- McCarthy, C., Carrea, A., Diambra, L., 2017. Bicodon bias can determine the role of synonymous SNPs in human diseases. *BMC Genom.* 18 (1), 227. <https://doi.org/10.1186/s12864-017-3609-6>.
- McKenzie, S.E., Taylor, S.M., Malladi, P., Yuhan, H., Cassel, D.L., Chien, P., Schwartz, E., Schreiber, A.D., Surrey, S., Reilly, M.P., 1999. The role of the human Fc receptor FcRIIA in the immune clearance of platelets: a transgenic mouse model. *J. Immunol.* 162, 4311–4318. <http://www.jimmunol.org/content/162/7/4311>.
- McKernan, K., Kyriakopoulos, A.M., McCullough, P.A., 2021. Differences in vaccine and SARS-CoV-2 replication derived mRNA: implications for cell biology and future disease. *OSF Prepr.* <https://doi.org/10.31219/osf.io/bcsa6>, November 26.
- McLachlan, S., Osman, M., Dube, K., Chiketero, P., Choi, Y., Fenton, N., 2021. Analysis of COVID-19 vaccine death reports from the vaccine adverse events reporting system (VAERS) database. Preprint. <https://doi.org/10.13140/RG.2.2.26987.26402>.
- Meyer, K.D., Patil, D.P., Zhou, J., Zinoviev, A., Skabkin, M.A., Elemento, O., Pestova, T. V., Qian, S.-B., Jaffrey, S.R., 2015. 5' UTR m(6A) promotes cap-independent translation. *Cell* 163 (4), 999–1010. <https://doi.org/10.1016/j.cell.2015.10.012>.
- Mishra, R., Banerjee, A.C., 2021. SARS-CoV-2 Spike targets USP33-IRF9 axis via exosomal miR-148a to activate human microglia. *Front. Immunol.* 12, 656700 <https://doi.org/10.3389/fimmu.2021.656700>.
- Mittal, M.K., Chaudhuri, G., 2009. In: Abstracts: First AACR International Conference on Frontiers in Basic Cancer Research–Oct 8–11, 2009. Boston, MA. <https://cancerres.aacrjournals.org/content/69/23/Supplement/A16.short>.
- Mulligan, M.J., Lyke, K.E., Kitchin, N., Absalon, J., Gurtman, A., Lockhart, S., Neuzil, K., Raabe, V., Bailey, R., Swanson, K.A., Li, P., Koury, K., Kalina, W., Cooper, D., Fontes-Garfias, C., Shi, P.-Y., Türeci, Ö., Tompkins, K.R., Walsh, E.E., Frenck, R., Falsley, A. R., Dormitzer, P.R., Gruber, W.C., Şahin, U., Jansen, K.U., 2020. Phase I/II study of COVID-19 RNA vaccine BNT162b1 in adults. *Nature* 586 (7830), 589–593. <https://doi.org/10.1038/s41586-020-2639-4>.
- Mungoven, T.J., Meylakh, N., Marciszewski, K.K., Macefield, V.G., Macey, P.M., Henderson, L.A., 2020. Microstructural changes in the trigeminal nerve of patients with episodic migraine assessed using magnetic resonance imaging. *J. Headache Pain* 21, 59. <https://doi.org/10.1186/s10194-020-01126-1>.
- Musella, M., Manic, G., de Maria, R., Vitale, I., Sistig, A., 2017. Type-I-interferons in infection and cancer: unanticipated dynamics with therapeutic implications. *OncImmunology* 6 (5), e131424. <https://doi.org/10.1080/2162402X.2017.1314424>.

- Nandha, R., Singh, H., 2012. Renin angiotensin system: a novel target for migraine prophylaxis. *Indian J. Pharmacol.* 44 (2), 157160 <https://doi.org/10.4103/0253-7613.93840>.
- National Cancer Institute, 2021. BRCA gene mutations: cancer risk and genetic testing fact sheet [online] Available at: <https://www.cancer.gov/about-cancer/causes-prevention/genetics/brca-fact-sheet#what-other-cancers-are-linked-to-harmful-variants-in-brca1-and-brca2>. (Accessed 27 November 2021).
- Nevezorova, T.A., Mordakhanova, E.R., Daminova, A.G., Ponomareva, A.A., Andrianova, I.A., Minh, G.L., Rauova, L., Litvinov, R.L., Weisel, J.W., 2019. Platelet factor 4-containing immune complexes induce platelet activation followed by calpain-dependent platelet death. *Cell Death Dis.* 5, 106. <https://doi.org/10.1038/s41420-019-0188-0>.
- Olsthoorn, R.C., 2014. G-quadruplexes within prion mRNA: the missing link in prion disease? *Nucleic Acids Res.* 42, 9327–9333. <https://doi.org/10.1093/nar/gku559>.
- Orlandini von Niessen, A.G., Polegano, M.A., Rechner, C., Plaschke, A., Kranz, L.M., Fesser, S., Diken, M., Löwer, M., Vallazza, B., Beissert, T., et al., 2019. Improving mRNA-based therapeutic gene delivery by expression-augmenting 3' UTRs identified by cellular library screening. *Mol. Ther.* 27 (4), 824–836. <https://doi.org/10.1016/j.ymthe.2018.12.011>.
- Otsuka, H., Fukao, A., Funakami, Y., Duncan, K.E., Fujiwara, T., 2019. Emerging evidence of translational control by AU-rich element-binding proteins. *Front. Genet.* 10, 332. <https://doi.org/10.3389/fgene.2019.00332.g>.
- Oudit, G.Y., Kassiri, Z., Jiang, C., Liu, P.P., Poutanen, S.M., Penninger, J.M., Butany, J., 2009. SARS coronavirus modulation of myocardial ACE2 expression and inflammation in patients with SARS. *Eur. J. Clin. Invest.* 39 (7), 618625 <https://doi.org/10.1111/j.1365-2362.2009.02153>.
- Ozaki, T., Nakagawara, A., 2011. Role of p53 in cell death and human cancers. *Cancers* 3 (1), 994–1013. <https://doi.org/10.3390/cancers3010994>.
- Panier, S., Boulton, S.J., 2014. Double-strand break repair: 53BP1 comes into focus. *Nat. Rev.* 15, 9. <https://doi.org/10.1038/nrm3719>.
- Pardi, N., Hogan, M.J., Porter, F.W., Weissman, D., 2018. mRNA vaccines - a new era in vaccinology. *Nat. Rev. Drug Discov.* 17 (4), 261–279. <https://doi.org/10.1038/nrd.2017.243>.
- Park, J.W., Lagniton, P., Liu, Y., Xu, R.H., 2021. mRNA vaccines for COVID-19: what, why and how. *Int. J. Biol. Sci.* 17 (6), 1446–1460. <https://doi.org/10.7150/ijbs.59233>, 2021.
- Passariello, M., Vetrei, C., Amato, F., De Lorenzo, C., 2021. Interactions of spike-RBD of SARS-CoV-2 and platelet factor 4: new insights in the etiopathogenesis of thrombosis. *Int. J. Mol. Sci.* 22, 8562. <https://doi.org/10.3390/ijms22168562>.
- Passegu, E., Ernst, P.A., 2009. IFN- α wakes up sleeping hematopoietic stem cells. *Nat. Med.* 15 (6), 612613 <https://doi.org/10.1038/nm0609-612>.
- Perricone, C., Ceccarelli, F., Neshet, G., Borella, E., Odeh, Q., Conti, F., Shoenfeld, Y., Valesini, G., 2014. Immune thrombocytopenic purpura (ITP) associated with vaccinations: a review of reported cases. *Immunol. Res.* 60, 226–235. <https://doi.org/10.1007/s12026-014-8597-x>.
- Psichogiou, M., Karabinis, A., Poulakou, G., Antoniadou, A., Kotanidou, A., Degiannis, D., Pavlopoulou, L.D., Chaidaroglou, A., Roussos, S., Mastrogianni, E., et al., 2021a. Comparative immunogenicity of BNT162b2 mRNA vaccine with natural COVID-19 infection. *Vaccines (Basel)* 9 (9), 1017. <https://doi.org/10.3390/vaccines9091017>.
- Psichogiou, M., Samarkos, M., Mikos, N., Hatzakis, A., 2021b. Reactivation of Varicella zoster virus after vaccination for SARS-CoV-2. *Vaccines* 9, 572. <https://doi.org/10.3390/vaccines9060572>.
- Qiu, X.-K., Ma, J., 2018. Alteration in microRNA-155 level correspond to severity of coronary heart disease. *Scand. J. Clin. Lab. Invest.* 78 (3), 219–223. <https://doi.org/10.1080/00365513.2018.1435904>.
- Qiu, S., Palavicini, J.P., Wang, J., Gonzalez, N.S., He, S., Dustin, E., Zou, C., Ding, L., Bhattacharjee, A., Van Skike, C.E., et al., 2021. Adult-onset CNS myelin sulfatide deficiency is sufficient to cause Alzheimer's disease-like neuroinflammation and cognitive impairment. *Mol. Neurodegener.* 16, 64. <https://doi.org/10.1186/s13024-021-00488-7>.
- Röltgen, K., Nielsen, S.C.A., Silva, O., Younes, S.F., Zaslavsky, M., Costales, C., Yang, F., Wirz, O.F., Solis, D., Hoh, R.A., 2022. Immune imprinting, breadth of variant recognition and germinal center response in human SARS-CoV-2 infection and vaccination. *Cell*. <https://doi.org/10.1016/j.cell.2022.01.018>. Jan 25; S0092-8674 (22)00076-9. [Epub ahead of print].
- Rasmussen, S.A., Abul-Husn, N.S., Casanova, J.L., Daly, M.J., Rehm, H.L., Murray, M.F., 2021. The intersection of genetics and COVID-19 in 2021: preview of the 2021 Rodney Howell Symposium. *Genet. Med.* 23 (6), 1001–1003. <https://doi.org/10.1038/s41436-021-01113-0>.
- Ratajczak, M.Z., Ratajczak, J., 2016. Horizontal transfer of RNA and proteins between cells by extracellular microvesicles: 14 years later. *Clin. Transl. Med.* 5, 7. <https://doi.org/10.1186/s40169-016-0087-4>.
- Rhea, E.M., Logsdon, A.F., Hanse, K.M., Williams, L.M., Reed, M.J., Baumann, K.K., Holden, S.J., Raber, J., Banks, W.A., Erickson, M.A., 2021. The S1 protein of SARS-CoV-2 crosses the blood-brain barrier in mice. *Nat. Neurosci.* 24, 368–378. <https://doi.org/10.1038/s41593-020-00771-8>.
- Rodrigues Figueiredo, R., Aparecida Azevedo, A., De Oliveira Penido, N., 2016. Positive association between tinnitus and arterial hypertension. *Front. Neurol.* 7, 171. <https://doi.org/10.3389/fneur.2016.00171>.
- Rodriguez-Perez, A.L., Borrajo, A., Rodriguez-Pallares, J., Guerra, M.J., Labandeira-Garcia, J.L., 2015. Interaction between NADPH-oxidase and Rho-kinase in angiotensin II-induced microglial activation. *Glia* 63, 466e482. <https://doi.org/10.1002/glia.22765>.
- Rose, J., 2021. Critical appraisal of VAERS pharmacovigilance: is the U.S. vaccine adverse events reporting system (VAERS) a functioning pharmacovigilance system? *Sci. Publ. Health Pol. the Law* 3, 100–129.
- Rouleau, S., Glouzon, J.S., Brumwell, A., Bisailon, M., Perreault, J.P., 2017. 3' UTR G-quadruplexes regulate miRNA binding. *RNA* 23 (8), 1172–1179. <https://doi.org/10.1261/rna.060962.117>.
- Rouleau, S.G., Garant, J.-M., Balduc, F., Bisailon, M., Perreault, J.-P., 2018. G-Quadruplexes influence pri-microRNA processing. *RNA Biol.* 15 (2), 198–206. <https://doi.org/10.1080/15476286.2017.1405211>.
- Rusk, N., 2008. When microRNAs activate translation. *Nat. Methods* 5, 122–123. <https://doi.org/10.1038/nmeth0208-122a>.
- Ruther, U., Nunnensiek, C., Muller, H.A., Bader, H., May, U., Jipp, P., 1998. Interferon alpha (IFN alpha 2a) therapy for herpes virus-associated inflammatory bowel disease (ulcerative colitis and Crohn's disease). *Hepato-Gastroenterology* 45 (21), 691–699. <https://doi.org/10.1111/j.1348-0421.1999.tb03365.x>.
- Sakai, Y., Ohga, S., Tonegawa, Y., Takada, H., Nakao, F., Nakayama, H., Aoki, T., Yamamori, S., Hara, T., 1998. Interferon-alpha therapy for chronic active Epstein-Barr virus infection: potential effect on the development of T-lymphoproliferative disease. *J. Pediatr. Hematol. Oncol.* 20 (4), 342–346.
- Sayers, T.J., 2011. Targeting the extrinsic apoptosis signaling pathway for cancer therapy. *Cancer Immunol. Immunother.* 60 (8), 1173–1180. <https://doi.org/10.1007/s00262-011-1008-4>.
- Schmidt, N., Lareau, C.A., Keshishian, H., Ganski, S., Schneider, C., Hennig, T., Melanson, R., Werner, S., Wei, Y., Zimmer, M., et al., 2021. The SARS-CoV-2 RNA-protein interactome in infected human cells. *Nat. Microbiol.* 6 (3), 339–353. <https://doi.org/10.1038/s41564-020-00846-z>.
- Schneider, W.M., Chevillotte, M.D., Rice, C.M., 2014. Interferon-stimulated genes: a complex web of host defenses. *Annu. Rev. Immunol.* 32, 513–545.
- Sekiguchi, K., Watanabe, N., Miyazaki, N., Ishizuchi, K., Iba, C., Tagashira, Y., Uno, S., Shibata, M., Hasegawa, N., Takemura, R., et al., 2021. Incidence of headache after COVID-19 vaccination in patients with history of headache: a cross-sectional study. *Cephalalgia*, 3331024211038654. <https://doi.org/10.1177/03331024211038654> [Epub ahead of print].
- Seneff, S., Nigh, G., 2021. Worse than the disease? Reviewing some possible unintended consequences of the mRNA vaccines against COVID-19. *IJVTIPR* 2 (1), 38–79.
- Shabalina, S.A., Spiridonov, N.A., Kashina, A., 2013. Sounds of silence: synonymous nucleotides as a key to biological regulation and complexity. *Nucleic Acids Res.* 41 (4), 2073–2094. <https://doi.org/10.1093/nar/gks1205>.
- Shatsky, I.N., Terenin, I.M., Smirnova, V.V., Andreev, D.E., 2018. Cap-independent translation: what's in a name? *Trends Biochem. Sci.* 43 (11), 882–895. <https://doi.org/10.1016/j.tibs.2018.04.011>.
- Shaw, G., Morse, S., Ararat, M., Graham, F.L., 2002. Preferential transformation of human neuronal cells by human adenoviruses and the origin of HEK 293 cells. *Faseb. J.* 16 (8), 869–871. <https://doi.org/10.1096/fj.01-0995fj>.
- Shitrit, P., Zuckerman, N.S., Mor, O., Gottesman, B.-S., Chowers, M., 2021. Nosocomial outbreak caused by the SARS-CoV-2 Delta variant in a highly vaccinated population, Israel, July 2021. *Euro Surveill.* 26 (39), 2100822 <https://doi.org/10.2807/1560-7917.ES.2021.26.39.2100822>.
- Shrotri, M., Navaratnam, A.M., Nguyen, V., Byrne, T., Geismar, C., Fragaszy, E., Beale, S., Fong, W.L.E., Patel, P., Kovar, J., et al., 2021. Spike-antibody waning after second dose of BNT162b2 or ChAdOx1. *Lancet* 398 (10298), 385–387.
- Simone, A., Herald, J., Chen, A., 2021. Acute myocarditis following COVID-19 mRNA vaccination in adults aged 18 years or older. *JAMA Intern. Med.* 181 (12), 1668–1670. <https://doi.org/10.1001/jamainternmed.2021.5511>.
- Small, E.M., Olson, E.N., 2011. Pervasive roles of microRNAs in cardiovascular biology. *Nature* 469 (7330), 336–342. <https://doi.org/10.1038/nature09783>.
- Sola, I., Almazán, F., Zúñiga, S., Enjuanes, L., 2015. Continuous and discontinuous RNA synthesis in coronaviruses. *Ann. Rev. Virol.* 2 (1), 265–288. <https://doi.org/10.1146/annurev-virology-100114-055218>.
- Solis, M., Goubau, D., Romieu-Mourez, R., Genin, P., Civas, A., Hiscott, J., 2006. Distinct functions of IRF-3 and IRF-7 in IFN- α gene regulation and control of anti-tumor activity in primary macrophages. *Biochem. Pharmacol.* 72 (11), 1469–1476. <https://doi.org/10.1016/j.bcp.2006.06.002>.
- Spiegel, J., Adhikari, S., Balasubramanian, S., 2020. The structure and function of DNA G-quadruplexes. *Trend. Chem.* 2 (2), 123–136. <https://doi.org/10.1016/j.trechm.2019.07.002>.
- Stertz, S., Hale, B.G., 2021. Interferon system deficiencies exacerbating severe pandemic virus infections. *Trends Microbiol.* 29 (11), 973–982. <https://doi.org/10.1016/j.tim.2021.03.001>.
- Suberbielle, E., Djukic, B., Evans, M., Kim, D.H., Taneja, P., Wang, X., Finucane, M., Knox, J., Ho, K., Devidze, N., et al., 2015. DNA repair factor BRCA1 depletion occurs in Alzheimer brains and impairs cognitive function in mice. *Nat. Commun.* 6, 8897. <https://doi.org/10.1038/ncomms9897>.
- Subramanian, S.V.; Kumar, A. Increases in COVID-19 are unrelated to levels of vaccination across 68 countries and 2947 counties in the United States. *Eur. J. Epidemiol.* 2021, 1–4. doi: 10.1007/s10654-021-00808-7.
- Sundstedt, A., Celander, M., Hedlund, G., 2008. Combining tumor-targeted superantigens with interferon-alpha results in synergistic anti-tumor effects. *Int. Immunopharm.* 8 (3), 442–452. <https://doi.org/10.1016/j.intimp.2007.11.006>, 2008.
- Svitkin, U.V., Herdy, B., Costa-Mattioli, M., Gingras, A.-C., Raught, B., Sonenberg, N., 2005. Eukaryotic translation initiation factor 4E availability controls the switch between cap-dependent and internal ribosomal entry site-mediated translation. *Mol. Cell Biol.* 25 (23), 10556–10565. <https://doi.org/10.1128/MCB.25.23.10556-10565.2005>.

- Takaoka, A., Tamura, T., Taniguchi, T., 2008. Interferon regulatory factor family of transcription factors and regulation of oncogenesis. *Cancer Sci.* 99 (3), 467–478. <https://doi.org/10.1111/j.1349-7006.2007.00720>.
- Testa, U., 2010. TRAIL/TRAIL-R in hematologic malignancies. *J. Cell. Biochem.* 110 (1), 21–34. <https://doi.org/10.1002/jcb.22549>.
- Tetz, G., Tetz, V., 2022. Prion-like domains in spike protein of SARS-CoV-2 differ across its variants and enable changes in affinity to ACE2. *Microorganisms* 10, 280. <https://doi.org/10.3390/microorganisms10020280>.
- Tian, W.-L., Guo, R., Wang, F., Jiang, Z.-X., Tang, P., Huang, Y.-M., Sun, L., 2018. The IRF9-SIRT1-P53 axis is involved in the growth of human acute myeloid leukemia. *Exp. Cell Res.* 365, 185–193. <https://doi.org/10.1016/j.yexcr.2018.02.036>.
- Timmers, L.F.S.M., Peixoto, J.V., Ducati, R.G., Bachega, J.F.R., de Mattos Pereira, L., Caceres, R.A., Majolo, F., da Silva, G.L., Anton, D.B., Dellagostin, O.A., Henriques, J. A.P., Xavier, L.L., Goettert, M.I., Laufer, S., 2021. SARS-CoV-2 mutations in Brazil: from genomics to putative clinical conditions. *Sci. Rep.* 11, 11998. <https://doi.org/10.1038/s41598-021-91585-6>.
- Tronvik, E., Stovner, L.J., Helde, G., Sand, T., Bovim, G., 2003. Prophylactic treatment of migraine with an angiotensin II receptor-blocker: a randomized controlled trial. *JAMA* 289 (1), 65–69. <https://doi.org/10.1001/jama.289.1.65>.
- Troya, J., Bastard, P., Planas-Serra, L., Ryan, P., Ruiz, M., de Carranza, M., Torres, J., Martinez, A., Abel, L., Casanova, J.-L., Pujol, A., 2021. Neutralizing autoantibodies to type I IFNs in >10% of patients with severe COVID-19 pneumonia hospitalized in Madrid, Spain. *J. Clin. Immunol.* 41, 914922. <https://doi.org/10.1007/s10875-021-01036-0>.
- Tsuno, T., Mejido, J., Zhao, T., Morrow, A., Zoon, K.C., 2009. IRF9 is a key factor for eliciting the antiproliferative activity of IFN- α . *J. Immunother.* 32 (8), 803. <https://doi.org/10.1097/CJI.0b013e3181ad4092>.
- Uranaka, T., Kashio, A., Ueha, R., Sato, T., Bing, H., Ying, G., Kinoshita, M., Kondo, K., Yamasoba, T., 2021. Expression of ACE2, TMPRSS2, and furin in mouse ear tissue, and the implications for SARS-CoV-2 infection. *Laryngoscope* 131 (6), E2013–E2017. <https://doi.org/10.1002/lary.29324>.
- Vaers Home. VAERS. n.d.). Retrieved December 5, 2021, from <https://vaers.hhs.gov/datadataguide.html>.
- van der Wijst, M.G.P., Vazquez, S.E., Hartoularos, G.C., Bastard, P., Grant, T., Bueno, R., Lee, D.S., Greenland, J.R., Sun, Y., Perez, R., et al., 2021. Type I interferon autoantibodies are associated with systemic immune alterations in patients with COVID-19. *Sci. Transl. Med.* 13 (612), eabh2624. <https://doi.org/10.1126/scitranslmed.abb2624>.
- Van Lint, S., Renmans, D., Broos, K., Dewitte, H., Lentacker, I., Heirman, C., Breckpot, K., Thielemans, K., 2015. The ReNAissanCe of mRNA-based cancer therapy. *Expert Rev. Vaccines* 14 (2), 235–251. <https://doi.org/10.1586/14760584.2015.957685>.
- Vanderlugt, C.L., Miller, S.D., 2002. Epitope spreading in immune-mediated diseases: implications for immunotherapy. *Nat. Rev. Immunol.* 2, 85–95. <https://doi.org/10.1038/nri724>.
- Verma, A.K., Lavine, K.J., Lin, C.-Y., 2021. Myocarditis after covid-19 mRNA vaccination. *NEJM* 385, 1332–1334. <https://doi.org/10.1056/NEJMc2109975>.
- Verweij, M.C., Wellish, M., Whitmer, T., Malouli, D., Lapel, M., Jonjić, S., Haas, J.G., DeFilippis, V.R., Mahalingam, R., Früh, K., 2015. Varicella viruses inhibit interferon-stimulated JAK-STAT signaling through multiple mechanisms. *PLoS Pathog.* 11 (5), e1004901. <https://doi.org/10.1371/journal.ppat.1004901>.
- Wang, X.-A., Zhang, R., Jiang, D., Deng, W., Zhang, S., Deng, S., Zhong, J., Wang, T., Zhu, L.-H., Yang, L., et al., 2013. Interferon regulatory factor 9 protects against hepatic insulin resistance and steatosis in male mice. *Hepatology* 58 (2), 603–616. <https://doi.org/10.1002/hep.26368>.
- Wang, H., Hu, H., Zhang, K., 2017a. Overview of interferon: characteristics, signaling and anti-cancer effect. *Arch. Biotechnol. Biomed.* 1, 1–16.
- Wang, C., Zhang, C., Liu, L., A. X., Chen, B., Li, Y., Du, J., 2017b. Macrophage-derived mir-155-containing exosomes suppress fibroblast proliferation and promote fibroblast inflammation during cardiac injury. *Mol. Ther.* 25 (1), 192–204. <https://doi.org/10.1016/j.ymthe.2016.09.001>.
- Wang, N., Zhan, Y., Zhu, L., Hou, Z., Liu, F., Song, P., Qiu, F., Wang, X., Zou, X., Wan, D., et al., 2020a. Retrospective multicenter cohort study shows early interferon therapy is associated with favorable clinical responses in COVID-19 patients. *Cell Host Microbe* 28 (3), 455–464. <https://doi.org/10.1016/j.chom.2020.07.005> e2.
- Wang, Y., Nakajima, T., Gonzalez, F.J., Tanaka, N., 2020b. PPARs as metabolic regulators in the liver: lessons from liver-specific PPAR-null mice. *Int. J. Mol. Sci.* 21, 2061. <https://doi.org/10.3390/ijms21062061>.
- Wang, E., Thombre, R., Shah, Y., Latanich, R., Wang, J., 2021. G-Quadruplexes as pathogenic drivers in neurodegenerative disorders. *Nucleic Acids Res.* 49 (9), 4816–4830. <https://doi.org/10.1093/nar/gkab164>.
- Wei, H., Chen, Q., Lin, L., Sha, C., Li, T., Liu, Y., Yin, X., Xu, Y., Chen, L., Gao, W., Li, Y., Zhu, X., 2021. Regulation of exosome production and cargo sorting. *Int. J. Biol. Sci.* 17 (1), 163–177. <https://doi.org/10.7150/ijbs.53671>.
- Weikert, U., Kühl, U., Schultheiss, H.-P., Rauch, U., 2002. Platelet activation is increased in patients with cardiomyopathy: myocardial inflammation and platelet reactivity. *Platelets* 13 (8), 487–491. <https://doi.org/10.1080/0953710021000057857>.
- Weiner, J., Lewis, D., Maertzdorf, J., Mollenkopf, H., Bodinham, C., Pizzoferro, K., Linley, C., Greenwood, A., Mantovani, A., Bottazzi, B., Denoel, P., Leroux-Roels, G., Kester, K., Jónsdóttir, I., van den Berg, R.A., Kaufmann, S., Del Giudice, G., 2019. Characterization of potential biomarkers of reactivity of licensed antiviral vaccines: randomized controlled clinical trials conducted by the BIOVACSAFE consortium. *Sci. Rep.* 9 (1), 20362. <https://doi.org/10.1038/s41598-019-56994-8>.
- Weldon, C., Dacanay, J.G., Gokhale, V., Boddupally, P.V.L., Behm-Ansmant, I., Burley, G. A., Branlant, C., Hurler, L.M., Dominguez, C., Eperon, I.C., 2018. Specific G-quadruplex ligands modulate the alternative splicing of Bcl-X. *Nucleic Acids Res.* 46 (2), 886–896. <https://doi.org/10.1093/nar/gkx1122>.
- Williams, G.D., Gokhale, N.S., Snider, D.L., Horner, S.M., 2020. The mRNA cap 2'-O-methyltransferase CMTR1 regulates the expression of certain interferon-stimulated genes. *mSphere* 5 (3). <https://doi.org/10.1128/mSphere.00202-20> e00202-e00220.
- Wisniewski, A.V., Campillo Luna, J., Redlich, C.A., 2021. Human IgG and IgA responses to COVID-19 mRNA vaccines. *PLoS One* 16 (6), e0249499. <https://doi.org/10.1371/journal.pone.0249499>.
- Wrapp, D., Wang, N., Corbett, K.S., Goldsmith, J.A., Hsieh, C.L., Abiona, O., Graham, B. S., McLellan, J.S., 2020. Cryo-EM structure of the 2019-nCoV spike in the prefusion conformation. *Science* 367 (6483), 1260–1263. <https://doi.org/10.1126/science.abb2507>.
- Xia, X., 2021. Detailed dissection and critical evaluation of the Pfizer/BioNTech and Moderna mRNA vaccines. *Vaccines* 9, 734. <https://doi.org/10.3390/vaccines9070734>.
- Yahi, N., Chahinian, H., Fantini, J., 2021. Infection-enhancing anti-SARS-CoV-2 antibodies recognize both the original Wuhan/D614G strain and Delta variants. A potential risk for mass vaccination? *J. Infect.* 83 (5), 607–635. <https://doi.org/10.1016/j.jinf.2021.08.010>.
- Yang, C., Hu, Y., Zhou, B., Bao, Y., Li, Z., Gong, C., Yang, H., Wang, S., Xiao, Y., 2020. The role of m6A modification in physiology and disease. *Cell Death Dis.* 11, 960. <https://doi.org/10.1038/s41419-020-03143-z>.
- Yoshikawa, F.S., Teixeira, F.M., Sato, M.N., Oliveira, L.M., 2019. Delivery of microRNAs by extracellular vesicles in viral infections: could the news be packaged? *Cells* 8 (6), 611. <https://doi.org/10.3390/cells8060611>.
- Yu, X., Odenthal, M., Fries, J.W.U., 2016. Exosomes as miRNA carriers: formation–function–future. *Int. J. Mol. Sci.* 17, 2028. <https://doi.org/10.3390/ijms17122028>.
- Zaccara, S., Ries, R.J., Jaffrey, S.R., 2019. Reading, writing and erasing mRNA methylation. *Nat. Rev.* 20, 608–624. <https://doi.org/10.1038/s41580-019-0168-5>.
- Zakaria, Z., Sapiain, N.A., Izaini Ghani, A.R., 2021. Cerebral venous sinus thrombosis 2 weeks after the first dose of mRNA SARS-CoV-2 vaccine. *Acta Neurochir.* 163 (8), 2359–2362. <https://doi.org/10.1007/s00701-021-04860-w>.
- Zhang, J., Powell, S.N., 2005. The role of the BRCA1 tumor suppressor in DNA double-strand break repair. *Mol. Cancer Res.* 3 (10), 531–539. <https://doi.org/10.1158/1541-7786.MCR-05-0192>.
- Zhang, W., Luo, J., Yang, F., Wang, Y., Yin, Y., Strom, A., Gustafsson, J.Å., Guan, X., 2016. BRCA1 inhibits AR-mediated proliferation of breast cancer cells through the activation of SIRT1. *Sci. Rep.* 6, 22034. <https://doi.org/10.1038/srep22034>.
- Zhang, R., Xiao, K., Gu, Y., Liu, H., Sun, X., 2020. Whole genome identification of potential G-quadruplexes and analysis of the G-quadruplex binding domain for SARS-CoV-2. *Front. Genet.* 11, 587829. <https://doi.org/10.3389/fgene.2020.587829>.
- Zhao, Y., Chen, W., Zhu, W., Meng, H., Chen, J., Zhang, J., 2017. Overexpression of interferon regulatory factor 7 (IRF7) reduces bone metastasis of prostate cancer cells in mice. *Oncol. Res.* 25 (4), 511. <https://doi.org/10.3727/096504016X14756226781802>.
- Zhou, M., Guo, J., Cha, J., Chae, M., Chen, S., Barral, J.M., Sachs, M.S., Liu, Y., 2013. Non-optimal codon usage affects expression, structure and function of clock protein FRQ. *Nature* 495 (7439), 111–115. <https://doi.org/10.1038/nature11833>.
- Zin Tun, G.S., Gleeson, D., Al-Joudeh, A., Dube, A., 2021. Immune-mediated hepatitis with the Moderna vaccine, no longer a coincidence but confirmed. *J. Hepatol.* <https://doi.org/10.1016/j.jhep.2021.09.031>. Oct 5. [Epub ahead of print].
- Zitvogel, L., Galluzzi, L., Kepp, O., Smyth, M.J., Kroemer, G., 2015. Type I interferons in anticancer immunity. *Nat. Rev. Immunol.* 15 (7), 405–414. <https://doi.org/10.1038/nri3845>.
- Zoll, J., Erkens Hulshof, S., Lanke, K., Roivduyn Lunel, F., Melchers, W.J., Schoondermark-van de Ven, E., Roivainen, M., Galama, J.M., van Kuppeveld, F.J., 2009. Saffold virus, a human Theiler's-like cardiocivirus, is ubiquitous and causes infection early in life. *PLoS Pathog.* 5 (5), e1000416. <https://doi.org/10.1371/journal.ppat.1000416>.

PRODUKTIE 18



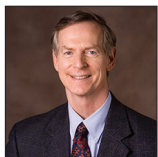
Editorial

COVID UPDATE: What is the truth?

Russell L. Blaylock

Retired Neurosurgeon, Theoretical Neuroscience Research, LLC, Ridgeland, Mississippi, United States.

E-mail: *Russell L. Blaylock - Blay6307@gmail.com



***Corresponding author:**

Russell L. Blaylock,
Theoretical Neuroscience
Research, LLC, Ridgeland,
Mississippi, United States.

Blay6307@gmail.com

Received : 06 February 2022

Accepted : 11 February 2022

Published : 22 April 2022

DOI

10.25259/SNI_150_2022

Quick Response Code:



The COVID-19 pandemic is one of the most manipulated infectious disease events in history, characterized by official lies in an unending stream lead by government bureaucracies, medical associations, medical boards, the media, and international agencies.^[3,6,57] We have witnessed a long list of unprecedented intrusions into medical practice, including attacks on medical experts, destruction of medical careers among doctors refusing to participate in killing their patients and a massive regimentation of health care, led by non-qualified individuals with enormous wealth, power and influence.

For the first time in American history a president, governors, mayors, hospital administrators and federal bureaucrats are determining medical treatments based not on accurate scientifically based or even experience based information, but rather to force the acceptance of special forms of care and “prevention”—including remdesivir, use of respirators and ultimately a series of essentially untested messenger RNA vaccines. For the first time in history medical treatment, protocols are not being formulated based on the experience of the physicians treating the largest number of patients successfully, but rather individuals and bureaucracies that have never treated a single patient—including Anthony Fauci, Bill Gates, EcoHealth Alliance, the CDC, WHO, state public health officers and hospital administrators.^[23,38]

The media (TV, newspapers, magazines, etc), medical societies, state medical boards and the owners of social media have appointed themselves to be the sole source of information concerning this so-called “pandemic”. Websites have been removed, highly credentialed and experienced clinical doctors and scientific experts in the field of infectious diseases have been demonized, careers have been destroyed and all dissenting information has been labeled “misinformation” and “dangerous lies”, even when sourced from top experts in the fields of virology, infectious diseases, pulmonary critical care, and epidemiology. These blackouts of truth occur even when this information is backed by extensive scientific citations from some of the most qualified medical specialists in the world.^[23] Incredibly, even individuals, such as Dr. Michael Yeadon, a retired ex-Chief Scientist, and vice-president for the science division of Pfizer Pharmaceutical company in the UK, who charged the company with making an extremely dangerous vaccine, is ignored and demonized. Further, he, along with other highly qualified scientists have stated that no one should take this vaccine.

Dr. Peter McCullough, one of the most cited experts in his field, who has successfully treated over 2000 COVID patients by using a protocol of early treatment (which the so-called experts completely ignored), has been the victim of a particularly vicious assault by those benefiting financially from the vaccines. He has published his results in peer reviewed journals, reporting an 80% reduction in hospitalizations and a 75% reduction in deaths by using early treatment.

This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial-Share Alike 4.0 License, which allows others to remix, transform, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

©2022 Published by Scientific Scholar on behalf of Surgical Neurology International

^[44] Despite this, he is under an unrelenting series of attacks by the information controllers, none of which have treated a single patient.

Neither Anthony Fauci, the CDC, WHO nor any medical governmental establishment has ever offered any early treatment other than Tylenol, hydration and call an ambulance once you have difficulty breathing. This is unprecedented in the entire history of medical care as early treatment of infections is critical to saving lives and preventing severe complications. Not only have these medical organizations and federal lapdogs not even suggested early treatment, they attacked anyone who attempted to initiate such treatment with all the weapons at their disposal—loss of license, removal of hospital privileges, shaming, destruction of reputations and even arrest.^[2]

A good example of this outrage against freedom of speech and providing informed consent information is the recent suspension by the medical board in Maine of Dr. Meryl Nass' medical license and the ordering of her to undergo a psychiatric evaluation for prescribing Ivermectin and sharing her expertise in this field.^[9,65] I know Dr. Nass personally and can vouch for her integrity, brilliance and dedication to truth. Her scientific credentials are impeccable. This behavior by a medical licensing board is reminiscent of the methodology of the Soviet KGB during the period when dissidents were incarcerated in psychiatric gulags to silence their dissent.

OTHER UNPRECEDENTED ATTACKS

Another unprecedented tactic is to remove dissenting doctors from their positions as journal editors, reviewers and retracting of their scientific papers from journals, even after these papers have been in print. Until this pandemic event, I have never seen so many journal papers being retracted—the vast majority promoting alternatives to official dogma, especially if the papers question vaccine safety. Normally a submitted paper or study is reviewed by experts in the field, called peer review. These reviews can be quite intense and nit picking in detail, insisting that all errors within the paper be corrected before publication. So, unless fraud or some other major hidden problem is discovered after the paper is in print, the paper remains in the scientific literature.

We are now witnessing a growing number of excellent scientific papers, written by top experts in the field, being retracted from major medical and scientific journals weeks, months and even years after publication. A careful review indicates that in far too many instances the authors dared question accepted dogma by the controllers of scientific publications—especially concerning the safety, alternative treatments or efficacy of vaccines.^[12,63] These journals rely on extensive advertising by pharmaceutical companies for their revenue. Several instances have occurred where powerful

pharmaceutical companies exerted their influence on owners of these journals to remove articles that in any way question these companies' products.^[13,34,35]

Worse still is the actual designing of medical articles for promoting drugs and pharmaceutical products that involve fake studies, so-called ghostwritten articles.^[49,64] Richard Horton is quoted by the Guardian as saying “journals have devolved into information laundering operations for the pharmaceutical industry.”^[13,63] Proven fraudulent “ghostwritten” articles sponsored by pharmaceutical giants have appeared regularly in top clinical journals, such as JAMA, and New England Journal of Medicine—never to be removed despite proven scientific abuse and manipulation of data.^[49,63]

Ghostwritten articles involve using planning companies whose job it is to design articles containing manipulated data to support a pharmaceutical product and then have these articles accepted by high-impact clinical journals, that is, the journals most likely to affect clinical decision making of doctors. Further, they supply doctors in clinical practice with free reprints of these manipulated articles. The Guardian found 250 companies engaged in this ghostwriting business. The final step in designing these articles for publication in the most prestigious journals is to recruit well recognized medical experts from prestigious institutions, to add their name to these articles. These recruited medical authors are either paid upon agreeing to add their name to these pre-written articles or they do so for the prestige of having their name on an article in a prestigious medical journal.^[11]

Of vital importance is the observation by experts in the field of medical publishing that nothing has been done to stop this abuse. Medical ethicists have lamented that because of this widespread practice “you can't trust anything.” While some journals insist on disclosure information, most doctors reading these articles ignore this information or excuse it and several journals make disclosure more difficult by requiring the reader to find the disclosure statements at another location. Many journals do not police such statements and omissions by authors are common and without punishment.

As concerns the information made available to the public, virtually all the media is under the control of these pharmaceutical giants or others who are benefitting from this “pandemic”. Their stories are all the same, both in content and even wording. Orchestrated coverups occur daily and massive data exposing the lies being generated by these information controllers are hidden from the public. All data coming over the national media (TV, newspaper and magazines), as well as the local news you watch every day, comes only from “official” sources—most of which are lies, distortions or completely manufactured out of whole cloth—all aimed to deceive the public.

Television media receives the majority of its advertising budget from the international pharmaceutical companies—this creates an irresistible influence to report all concocted studies supporting their vaccines and other so-called treatments.^[14] In 2020 alone the pharmaceutical industries spent 6.56 billion dollars on such advertising.^[13,14] Pharma TV advertising amounted to 4.58 billion, an incredible 75% of their budget. That buys a lot of influence and control over the media. World famous experts within all fields of infectious diseases are excluded from media exposure and from social media should they in any way deviate against the concocted lies and distortions by the makers of these vaccines. In addition, these pharmaceutical companies spend tens of millions on social media advertising, with Pfizer leading the pack with \$55 million in 2020.^[14]

While these attacks on free speech are terrifying enough, even worse is the virtually universal control hospital administrators have exercised over the details of medical care in hospitals. These hirings are now instructing doctors which treatment protocols they will adhere to and which treatments they will not use, no matter how harmful the “approved” treatments are or how beneficial the “unapproved” treatments are.^[33,57]

Never in the history of American medicine have hospital administrators dictated to its physicians how they will practice medicine and what medications they can use. The CDC has no authority to dictate to hospitals or doctors concerning medical treatments. Yet, most physicians complied without the slightest resistance.

The federal Care Act encouraged this human disaster by offering all US hospitals up to 39,000 dollars for each ICU patient they put on respirators, despite the fact that early on it was obvious that the respirators were a major cause of death among these unsuspecting, trusting patients. In addition, the hospitals received 12,000 dollars for each patient that was admitted to the ICU—explaining, in my opinion and others, why all federal medical bureaucracies (CDC, FDA, NIAID, NIH, etc) did all in their power to prevent life-saving early treatments.^[46] Letting patients deteriorate to the point they needed hospitalization, meant big money for all hospitals. A growing number of hospitals are in danger of bankruptcy, and many have closed their doors, even before this “pandemic”.^[50] Most of these hospitals are now owned by national or international corporations, including teaching hospitals.^[10]

It is also interesting to note that with the arrival of this “pandemic” we have witnessed a surge in hospital corporate chains buying up a number of these financially at-risk hospitals.^[1,54] It has been noted that billions in Federal Covid aid is being used by these hospital giants to acquire these financially endangered hospitals, further increasing the power of corporate medicine over physician independence. Physicians expelled from their hospitals are finding it difficult

to find other hospitals staffs to join since they too may be owned by the same corporate giant. As a result, vaccine mandate policies include far larger numbers of hospital employees. For example, Mayo Clinic fired 700 employees for exercising their right to refuse a dangerous, essentially untested experimental vaccine.^[51,57] Mayo Clinic did this despite the fact that many of these employees worked during the worst of the epidemic and are being fired when the Omicron variant is the dominant strain of the virus, has the pathogenicity of a common cold for most and the vaccines are ineffective in preventing the infection.

In addition, it has been proven that the vaccinated asymptomatic person has a nasopharyngeal titer of the virus as high as an infected unvaccinated person. If the purpose of the vaccine mandate is to prevent viral spread among the hospital staff and patients, then it is the vaccinated who present the greatest risk of transmission, not the unvaccinated. The difference is that a sick unvaccinated person would not go to work, the asymptomatic vaccinated spreader will.

What we do know is that major medical centers, such as Mayo Clinic, receive tens of millions of dollars in NIH grants each year as well as monies from the pharmaceutical makers of these experimental “vaccines”. In my view, that is the real consideration driving these policies. If this could be proven in a court of law the administrators making these mandates should be prosecuted to the fullest extent of the law and sued by all injured parties.

The hospital bankruptcy problem has grown increasingly acute due to hospitals vaccine mandates and resulting large number of hospitals staff, especially nurses, refusing to be forcibly vaccinated.^[17,51] This is all unprecedented in the history of medical care. Doctors within hospitals are responsible for the treatment of their individual patients and work directly with these patients and their families to initiate these treatments. Outside organizations, such as the CDC, have no authority to intervene in these treatments and to do so exposes the patients to grave errors by an organization that has never treated a single COVID-19 patient.

When this pandemic started, hospitals were ordered by the CDC to follow a treatment protocol that resulted in the deaths of hundreds of thousands of patients, most of whom would have recovered had proper treatments been allowed.^[43,44] The majority of these deaths could have been prevented had doctors been allowed to use early treatment with such products as Ivermectin, hydroxy-chloroquine and a number of other safe drugs and natural compounds. It has been estimated, based on results by physicians treating the most covid patients successfully, that of the 800,000 people that we are told died from Covid, 640,000 could have not only been saved, but could have, in many cases, returned to their pre-infection health status had mandated early treatment

with these proven methods been used. This neglect of early treatment constitutes mass murder. That means 160,000 would have actually died, far less than the number dying at the hands of bureaucracies, medical associations and medical boards that refused to stand up for their patients. According to studies of early treatment of thousands of patients by brave, caring doctors, seventy-five to eighty percent of the deaths could have been prevented.^[43,44]

Incredibly, these knowledgeable doctors were prevented from saving these Covid-19 infected people. It should be an embarrassment to the medical profession that so many doctors mindlessly followed the deadly protocols established by the controllers of medicine.

One must also keep in mind that this event never satisfied the criteria for a pandemic. The World Health Organization changed the criteria to make this a pandemic. To qualify for a pandemic status the virus must have a high mortality rate for the vast majority of people, which it didn't (with a 99.98% survival rate), and it must have no known existing treatments—which this virus had—in fact, a growing number of very successful treatments.

The draconian measures established to contain this contrived “pandemic” have never been shown to be successful, such as masking the public, lockdowns, and social distancing. A number of carefully done studies during previous flu seasons demonstrated that masks, of any kind, had never prevented the spread of the virus among the public.^[60]

In fact, some very good studies suggested that the masks actually spread the virus by giving people a false sense of security and other factors, such as the observation that people were constantly breaking sterile technique by touching their mask, improper removal and by leakage of infectious aerosols around the edges of the mask. In addition masks were being disposed of in parking lots, walking trails, laid on tabletops in restaurants and placed in pockets and purses.

Within a few minutes of putting on the mask, a number of pathogenic bacteria can be cultured from the masks, putting the immune suppressed person at a high risk of bacterial pneumonia and children at a higher risk of meningitis.^[16] A study by researchers at the University of Florida cultured over 11 pathogenic bacteria from the inside of the mask worn by children in schools.^[40]

It was also known that children were at essentially no risk of either getting sick from the virus or transmitting it.

In addition, it was also known that wearing a mask for over 4 hours (as occurs in all schools) results in significant hypoxia (low blood oxygen levels) and hypercapnia (high CO2 levels), which have a number of deleterious effects on health, including impairing the development of the child's brain.^[4,72,52]

We have known that brain development continues long after the grade school years. A recent study found that children born during the “pandemic” have significantly lower IQs—yet school boards, school principals and other educational bureaucrats are obviously unconcerned.^[18]

TOOLS OF THE INDOCTRINATION TRADE

The designers of this pandemic anticipated a pushback by the public and that major embarrassing questions would be asked. To prevent this, the controllers fed the media a number of tactics, one of the most commonly used was and is the “fact check” scam. With each confrontation with carefully documented evidence, the media “fact checkers” countered with the charge of “misinformation”, and an unfounded “conspiracy theory” charge that was, in their lexicon, “debunked”. Never were we told who the fact checkers were or the source of their “debunking” information—we were just to believe the “fact checkers”. A recent court case established under oath that facebook “fact checkers” used their own staff opinion and not real experts to check “facts”.^[59] When sources are in fact revealed they are invariably the corrupt CDC, WHO or Anthony Fauci or just their opinion. Here is a list of things that were labeled as “myths” and “misinformation” that were later proven to be true.

- The asymptomatic vaccinated are spreading the virus equally as with unvaccinated symptomatic infected.
- The vaccines cannot protect adequately against new variants, such as Delta and Omicron.
- Natural immunity is far superior to vaccine immunity and is most likely lifelong.
- Vaccine immunity not only wanes after several months, but all immune cells are impaired for prolonged periods, putting the vaccinated at a high risk of all infections and cancer.
- COVID vaccines can cause a significant incidence of blood clots and other serious side effects
- The vaccine proponents will demand numerous boosters as each variant appears on the scene.
- Fauci will insist on the covid vaccine for small children and even babies.
- Vaccine passports will be required to enter a business, fly in a plane, and use public transportation
- There will be internment camps for the unvaccinated (as in Australia, Austria and Canada)
- The unvaccinated will be denied employment.
- There are secret agreements between the government, elitist institutions, and vaccine makers
- Many hospitals were either empty or had low occupancy during the pandemic.
- The spike protein from the vaccine enters the nucleus of the cell, altering cell DNA repair function.
- Hundreds of thousands have been killed by the vaccines and many times more have been permanently damaged.

- Early treatment could have saved the lives of most of the 700,000 who died.
- Vaccine-induced myocarditis (which was denied initially) is a significant problem and clears over a short period.
- Special deadly lots (batches) of these vaccines are mixed with the mass of other Covid-19 vaccines

Several of these claims by those opposing these vaccines now appear on the CDC website—most still identified as “myths”. Today, extensive evidence has confirmed that each of these so-called “myths” were in fact true. Many are even admitted by the “saint of vaccines”, Anthony Fauci. For example, we were told, even by our cognitively impaired President, that once the vaccine was released all the vaccinated people could take off their masks. Oops! We were told shortly afterward—the vaccinated have high concentrations (titers) of the virus in their noses and mouths (nasopharynx) and can transmit the virus to others in which they come into contact—especially their own family members. On go the masks once again—in fact double masking is recommended. The vaccinated are now known to be the main superspreaders of the virus and hospitals are filled with the sick vaccinated and people suffering from serious vaccine complications.^[27,42,45]

Another tactic by the vaccine proponents is to demonize those who reject being vaccinated for a variety of reasons. The media refers to these critically thinking individuals as “anti-vaxxers”, “vaccine deniers”, “Vaccine resisters”, “murders”, “enemies of the greater good” and as being the ones prolonging the pandemic. I have been appalled by the vicious, often heartless attacks by some of the people on social media when a parent or loved one relates a story of the terrible suffering and eventual death, they or their loved one suffered as a result of the vaccines. Some psychopaths tweet that they are glad that the loved one died or that the dead vaccinated person was an enemy of good for telling of the event and should be banned. This is hard to conceptualize. This level of cruelty is terrifying, and signifies the collapse of a moral, decent, and compassionate society.

It is bad enough for the public to sink this low, but the media, political leaders, hospital administrators, medical associations and medical licensing boards are acting in a similar morally dysfunctional and cruel way.

LOGIC, REASONING, AND SCIENTIFIC EVIDENCE HAS DISAPPEARED IN THIS EVENT

Has scientific evidence, carefully done studies, clinical experience and medical logic had any effect on stopping these ineffective and dangerous vaccines? Absolutely not! The draconian efforts to vaccinate everyone on the planet continues (except the elite, postal workers, members of Congress and other insiders).^[31,62]

In the case of all other drugs and previous conventional vaccines under review by the FDA, the otherwise unexplained deaths of 50 or less individuals would result in a halt in further distribution of the product, as happened on 1976 with the swine flu vaccine. With over 18,000 deaths being reported by the VAERS system for the period December 14, 2020 and December 31st, 2021 as well as 139,126 serious injuries (including deaths) for the same period there is still no interest in stopping this deadly vaccine program.^[61] Worse, there is no serious investigation by any government agency to determine why these people are dying and being seriously and permanently injured by these vaccines.^[15,67] What we do see is a continuous series of coverups and evasions by the vaccine makers and their promoters.

The war against effective cheap and very safe repurposed drugs and natural compounds, that have proven beyond all doubt to have saved millions of lives all over the world, has not only continued but has stepped up in intensity.^[32,34,43]

Doctors are told they cannot provide these life-saving compounds for their patients and if they do, they will be removed from the hospital, have their medical license removed or be punished in many other ways. A great many pharmacies have refused to fill prescriptions for Ivermectin or hydroxychloroquine, despite the fact that millions of people have taken these drugs safely for over 60 years in the case of hydroxychloroquine and decades for Ivermectin.^[33,36] This refusal to fill prescriptions is unprecedented and has been engineered by those wanting to prevent alternative methods of treatment, all based on protecting vaccine expansion to all. Several companies that make hydroxy chloroquine agreed to empty their stocks of the drug by donating them to the Strategic National Stockpile, making this drug far more difficult to get.^[33] Why would the government do that when over 30 well-done studies have shown that this drug reduced deaths anywhere from 66% to 92% in other countries, such as India, Egypt, Argentina, France, Nigeria, Spain, Peru, Mexico, and others?^[23]

The critics of these two life-saving drugs are most often funded by Bill Gates and Anthony Fauci, both of which are making millions from these vaccines.^[48,15]

To further stop the use of these drugs, the pharmaceutical industry and Bill Gates/Anthony Fauci funded fake research to make the case that hydroxy chloroquine was a dangerous drug and could damage the heart.^[34] To make this fraudulent case the researchers administered the sickest of covid patients a near lethal dose of the drug, in a dose far higher than used on any covid patient by Dr. Kory, McCullough and other “real”, and compassionate doctors, physicians who were actually treating covid patients.^[23]

The controlled, lap-dog media, of course, hammered the public with stories of the deadly effect of hydroxychloroquine, all with a terrified look of fake panic. All these

stories of ivermectin dangers were shown to be untrue and some of the stories were incredibly preposterous.^[37,43]

The attack on Ivermectin was even more vicious than against hydroxy-chloroquine. All of this, and a great deal more is meticulously chronicled in Robert Kennedy, Jr's excellent new book—*The Real Anthony Fauci. Bill Gates, Big Pharma, and the Global War on Democracy and Public Health.*^[32] If you are truly concerned with the truth and with all that has occurred since this atrocity started, you must not only read, but study this book carefully. It is fully referenced and covers all topics in great detail. This is a designed human tragedy of Biblical proportions by some of the most vile, heartless, psychopaths in history.

Millions have been deliberately killed and crippled, not only by this engineered virus, but by the vaccine itself and by the draconian measures used by these governments to “control the pandemic spread”. We must not ignore the “deaths by despair” caused by these draconian measures, which can exceed hundreds of thousands. Millions have starved in third world countries as a result. In the United States alone, of the 800,000 who died, claimed by the medical bureaucracies, well over 600,000 of these deaths were the result of the purposeful neglect of early treatment, blocking the use of highly effective and safe repurposed drugs, such as hydroxy-chloroquine and Ivermectin, and the forced use of deadly treatments such as remdesivir and use of ventilators. This does not count the deaths of despair and neglected medical care caused by the lockdown and hospital measures forced on healthcare systems.

To compound all this, because of vaccine mandates among all hospital personnel, thousands of nurses and other hospital workers have resigned or been fired.^[17,30,51] This has resulted in critical shortages of these vital healthcare workers and dangerous reductions of ICU beds in many hospitals. In addition, as occurred in the Lewis County Healthcare System, a specialty-hospital system in Lowville, N.Y., closed its maternity unit following the resignation of 30 hospital staff over the state's disastrous vaccine mandate orders. The irony in all these cases of resignations is that the administrators unhesitatingly accepted these mass staffing losses despite rantings about suffering from short staffing during a “crisis”. This is especially puzzling when we learned that the vaccines did not prevent viral transmission and the present predominant variant is of extremely low pathogenicity.

DANGERS OF THE VACCINES ARE INCREASINGLY REVEALED BY SCIENCE

While most researchers, virologists, infectious disease researchers and epidemiologists have been intimidated into silence, a growing number of high integrity individuals with tremendous expertise have come forward to tell the truth—that is, that these vaccines are deadly.

Most new vaccines must go through extensive safety testing for years before they are approved. New technologies, such as the mRNA and DNA vaccines, require a minimum of 10 years of careful testing and extensive follow-up. These new so-called vaccines were “tested” for only 2 months and then the results of these safety test were and continue to be kept secret. Testimony before Senator Ron Johnson by several who participated in the 2 months study indicates that virtually no follow-up of the participants of the pre-release study was ever done.^[67] Complaints of complications were ignored and despite promises by Pfizer that all medical expenses caused by the “vaccines” would be paid by Pfizer, these individuals stated that none were paid.^[66] Some medical expenses exceed 100,000 dollars.

As an example of the deception by Pfizer, and the other makers of mRNA vaccines, is the case of 12-year-old Maddie de Garay, who participated in the Pfizer vaccine pre-release safety study. At Sen. Johnson's presentation with the families of the vaccine injured, her mother told of her child's recurrent seizures, that she is now confined to a wheelchair, must be tube fed and suffers permanent brain damage. On the Pfizer safety evaluation submitted to the FDA her only side effect is listed as having a “stomachache”. Each person submitted similar horrifying stories.

The Japanese resorted to a FOIA (Freedom of Information Act) lawsuit to force Pfizer to release its secret biodistribution study. The reason Pfizer wanted it kept secret is that it demonstrated that Pfizer lied to the public and the regulatory agencies about the fate of the injected vaccine contents (the mRNA enclosed nano-lipid carrier). They claimed that it remained at the site of the injection (the shoulder), when in fact their own study found that it rapidly spread throughout the entire body by the bloodstream within 48 hours.

The study also found that these deadly nano-lipid carriers collected in very high concentrations in several organs, including the reproductive organs of males and females, the heart, the liver, the bone marrow, and the spleen (a major immune organ). The highest concentration was in the ovaries and the bone marrow. These nano-lipid carriers also were deposited in the brain.

Dr. Ryan Cole, a pathologist from Idaho reported a dramatic spike in highly aggressive cancers among vaccinated individuals, (not reported in the Media). He found a frighteningly high incidence of highly aggressive cancers in vaccinated individuals, especially highly invasive melanomas in young people and uterine cancers in women.^[26] Other reports of activation of previously controlled cancers are also appearing among vaccinated cancer patients.^[47] Thus far, no studies have been done to confirm these reports, but it is unlikely such studies will be done, at least studies funded by grants from the NIH.

The high concentration of spike proteins found in the ovaries in the biodistribution study could very well impair fertility in young women, alter menstruation, and could put them at an increased risk of ovarian cancer. The high concentration in the bone marrow, could also put the vaccinated at a high risk of leukemia and lymphoma. The leukemia risk is very worrisome now that they have started vaccinating children as young as 5 years of age. No long-term studies have been conducted by any of these makers of Covid-19 vaccines, especially as regards the risk of cancer induction. Chronic inflammation is intimately linked to cancer induction, growth and invasion and vaccines stimulate inflammation.

Cancer patients are being told they should get vaccinated with these deadly vaccines. This, in my opinion, is insane. Newer studies have shown that this type of vaccine inserts the spike protein within the nucleus of the immune cells (and most likely many cell types) and once there, inhibits two very important DNA repair enzymes, BRCA1 and 53BP1, whose duty it is to repair damage to the cell's DNA.^[29] Unrepaired DNA damage plays a major role in cancer.

There is a hereditary disease called xeroderma pigmentosum in which the DNA repair enzymes are defective. These ill-fated individuals develop multiple skin cancers and a very high incidence of organ cancer as a result. Here we have a vaccine that does the same thing, but to a less extensive degree.

One of the defective repair enzymes caused by these vaccines is called BRCA1, which is associated with a significantly higher incidence of breast cancer in women and prostate cancer in men.

It should be noted that no studies were ever done on several critical aspects of this type of vaccine.

- They have never been tested for long term effects
- They have never been tested for induction of autoimmunity
- They have never been properly tested for safety during any stage of pregnancy
- No follow-up studies have been done on the babies of vaccinated women
- There are no long-term studies on the children of vaccinated pregnant women after their birth (Especially as neurodevelopmental milestone occur).
- It has never been tested for effects on a long list of medical conditions:
 - Diabetes
 - Heart disease
 - Atherosclerosis
 - Neurodegenerative diseases
 - Neuropsychiatric effects
 - Induction of autism spectrum disorders and schizophrenia
 - Long term immune function

- Vertical transmission of defects and disorders
- Cancer
- Autoimmune disorders

Previous experience with the flu vaccines clearly demonstrates that the safety studies done by researchers and clinical doctors with ties to pharmaceutical companies were essentially all either poorly done or purposefully designed to falsely show safety and coverup side effects and complications. This was dramatically demonstrated with the previously mentioned phony studies designed to indicate that hydroxy Chloroquine and Ivermectin were ineffective and too dangerous to use.^[34,36,37] These fake studies resulted in millions of deaths and severe health disasters worldwide. As stated, 80% of all deaths were unnecessary and could have been prevented with inexpensive, safe repurposed medications with a very long safety history among millions who have taken them for decades or even a lifetime.^[43,44]

It is beyond ironic that those claiming that they are responsible for protecting our health approved a poorly tested set of vaccines that has resulted in more deaths in less than a year of use than all the other vaccines combined given over the past 30 years. Their excuse when confronted was—“we had to overlook some safety measures because this was a deadly pandemic”.^[28,46]

In 1986 President Reagan signed the National Childhood Vaccine Injury Act, which gave blanket protection to pharmaceutical makers of vaccines against injury litigation by families of vaccine injured individuals. The Supreme Court, in a 57-page opinion, ruled in favor of the vaccine companies, effectively allowing vaccine makers to manufacture and distribute dangerous, often ineffective vaccines to the population without fear of legal consequences. The court did insist on a vaccine injury compensation system which has paid out only a very small number of rewards to a large number of severely injured individuals. It is known that it is very difficult to receive these awards. According to the Health Resources and Services Administration, since 1988 the Vaccine Injury Compensation Program (VICP) has agreed to pay 3,597 awards among 19,098 vaccine injured individuals applying amounting to a total sum of \$3.8 billion. This was prior to the introduction of the Covid-19 vaccines, in which the deaths alone exceed all deaths related to all the vaccines combined over a thirty-year period.

In 2018 President Trump signed into law the “right-to-try” law which allowed the use of experimental drugs and all unconventional treatments to be used in cases of extreme medical conditions. As we have seen with the refusal of many hospitals and even blanket refusal by states to allow Ivermectin, hydroxy-chloroquine or any other unapproved “official” methods to treat even terminal Covid-19 cases, these nefarious individuals have ignored this law.

Strangely, they did not use this same logic or the law when it came to Ivermectin and Hydroxy Chloroquine, both of which had undergone extensive safety testing by over 30 clinical studies of a high quality and given glowing reports on both efficacy and safety in numerous countries. In addition, we had a record of use for up to 60 years by millions of people, using these drugs worldwide, with an excellent safety record. It was obvious that a group of very powerful people in conjunction with pharmaceutical conglomerates didn't want the pandemic to end and wanted vaccines as the only treatment option. Kennedy's book makes this case using extensive evidence and citations.^[14,32]

Dr. James Thorpe, an expert in maternal-fetal medicine, demonstrates that these covid-19 vaccines given during pregnancy have resulted in a 50-fold higher incidence of miscarriage than reported with all other vaccines combined.^[28] When we examine his graph on fetal malformations there was a 144-fold higher incidence of fetal malformation with the Covid-19 vaccines given during pregnancy as compared to all other vaccines combined. Yet, the American Academy of Obstetrics and Gynecology and the American College of Obstetrics and Gynecology endorse the safety of these vaccines for all stages of pregnancy and among women breast feeding their babies.

It is noteworthy that these medical specialty groups have received significant funding from Pfizer pharmaceutical company. The American College of Obstetrics and Gynecology, just in the 4th quarter of 2010, received a total of \$11,000 from Pfizer Pharmaceutical company alone.^[70] Funding from NIH grants are much higher.^[20] The best way to lose these grants is to criticize the source of the funds, their products or pet programs. Peter Duesberg, because of his daring to question Fauci's pet theory of AIDS caused by HIV virus, was no longer awarded any of the 30 grant applications he submitted after going public. Prior to this episode, as the leading authority on retroviruses in the world, he had never been turned down for an NIH grant.^[39] This is how the "corrupted" system works, even though much of the grant money comes from our taxes.

HOT LOTS—DEADLY BATCHES OF THE VACCINES

A new study has now surfaced, the results of which are terrifying.^[25] A researcher at Kingston University in London, has completed an extensive analysis of the VAERS data (a subdepartment of the CDC which collects voluntary vaccine complication data), in which he grouped reported deaths following the vaccines according to the manufacturer's lot numbers of the vaccines. Vaccines are manufactured in large batches called lots. What he discovered was that the vaccines are divided into over 20,000 lots and that one out of every 200 of these batches (lots) is demonstrably deadly to anyone who

receives a vaccine from that lot, which includes thousands of vaccine doses.

He examined all manufactured vaccines—Pfizer, Moderna, Johnson and Johnson (Janssen), etc. He found that among every 200 batches of the vaccine from Pfizer and other makers, one batch of the 200 was found to be over 50x more deadly than vaccines batches from other lots. The other vaccine lots (batches) were also causing deaths and disabilities, but nowhere near to this extent. These deadly batches should have appeared randomly among all "vaccines" if it was an unintentional event. However, he found that 5% of the vaccines were responsible for 90% of the serious adverse events, including deaths. The incidence of deaths and serious complications among these "hot lots" varied from over 1000% to several thousand percent higher than comparable safer lots. If you think this was by accident—think again. This is not the first time "hot lots" were, in my opinion, purposefully manufactured and sent across the nation—usually vaccines designed for children. In one such scandal, "hot lots" of a vaccine ended up all in one state and the damage immediately became evident. What was the manufacturer's response? It wasn't to remove the deadly batches of the vaccine. He ordered his company to scatter the hot lots across the nation so that authorities would not see the obvious deadly effect.

All lots of a vaccine are numbered—for example Modera labels them with such codes as 013M20A. It was noted that the batch numbers ended in either 20A or 21A. Batches ending in 20A were much more toxic than the ones ending in 21A. The batches ending in 20A had about 1700 adverse events, versus a few hundred to twenty or thirty events for the 21A batches. This example explains why some people had few or no adverse events after taking the vaccine while others are either killed or severely and permanently harmed. To see the researcher's explanation, go to <https://www.bitcoute.com/video/6xIYPZBkydsu/> In my opinion these examples strongly suggest an intentional alteration of the production of the "vaccine" to include deadly batches.

I have met and worked with a number of people concerned with vaccine safety and I can tell you they are not the evil anti-vaxxers you are told they are. They are highly principled, moral, compassionate people, many of which are top researchers and people who have studied the issue extensively. Robert Kennedy, Jr, Barbara Lou Fisher, Dr. Meryl Nass, Professor Christopher Shaw, Megan Redshaw, Dr. Sherri Tenpenny, Dr. Joseph Mercola, Neil Z. Miller, Dr. Lucija Tomjinovic, Dr. Stephanie Seneff, Dr. Steve Kirsch and Dr. Peter McCullough just to name a few. These people have nothing to gain and a lot to lose. They are attacked viciously by the media, government agencies, and elite billionaires who think they should control the world and everyone in it.

WHY DID FAUCI WANT NO AUTOPSIES OF THOSE WHO DIED AFTER VACCINATION?

There are many things about this “pandemic” that are unprecedented in medical history. One of the most startling is that at the height of the pandemic so few autopsies, especially total autopsies, were being done. A mysterious virus was rapidly spreading around the world, a selected group of people with weakened immune systems were getting seriously ill and many were dying and the one way we could rapidly gain the most knowledge about this virus—an autopsy, was being discouraged.

Guerrero noted that by the end of April, 2020 approximately 150,000 people had died, yet there were only 16 autopsies performed and reported in the medical literature.^[24] Among these, only seven were complete autopsies, the remaining 9 being partial or by needle biopsy or incisional biopsy. Only after 170,000 deaths by Covid-19 and four months into the pandemic were the first series of autopsies actually done, that is, more than ten. And only after 280,000 deaths and another month, were the first large series of autopsies performed, some 80 in number.^[22] Sperhake, in a call for autopsies to be done without question, noted that the first full autopsy reported in the literature along with photomicrographs appeared in a medico-legal journal from China in February 2020.^[41,68] Sperhake expressed confusion as to why there was a reluctance to perform autopsies during the crisis, but he knew it was not coming from the pathologists. The medical literature was littered with appeals by pathologist for more autopsies to be performed.^[58] Sperhake further noted that the Robert Koch Institute (The German health monitoring system) at least initially advised against doing autopsies. He also knew that at the time 200 participating autopsy institutions in the United States had done at least 225 autopsies among 14 states.

Some have claimed that this dearth of autopsies was based on the government’s fear of infection among the pathologists, but a study of 225 autopsies on Covid-19 cases demonstrated only one case of infection among the pathologist and this was concluded to have been an infection contracted elsewhere.^[19] Guerrero ends his article calling for more autopsies with this observation: “Shoulder to shoulder, clinical and forensic pathologists overcame the obstructions of autopsy studies in Covid-19 victims and hereby generated valuable knowledge on the pathophysiology of the interaction between the SARS-CoV-2 and the human body, thus contributing to our understanding of the disease.”^[24]

Suspicion concerning the worldwide reluctance of nations to allow full post mortem studies of Covid-19 victims may be based on the idea that it was more than by chance. There are at least two possibilities that stand out. First, those leading the progression of this “non-pandemic” event into

a perceived worldwide “deadly pandemic”, were hiding an important secret that autopsies could document. Namely, just how many of the deaths were actually caused by the virus? To implement draconian measures, such as mandated mask wearing, lockdowns, destruction of businesses, and eventually mandated forced vaccination, they needed very large numbers of covid-19 infected dead. Fear would be the driving force for all these destructive pandemic control programs.

Elder et al in his study classified the autopsy findings into four groups.^[22]

1. Certain Covid-19 death
2. Probably Covid-19 death
3. Possible Covid-19 death
4. Not associated with Covid-19, despite the positive test.

What possibly concerned or even terrified the engineers of this pandemic was that autopsies just might, and did, show that a number of these so-called Covid-19 deaths in truth died of their comorbid diseases. In the vast majority of autopsy studies reported, pathologists noted multiple comorbid conditions, most of which at the extremes of life could alone be fatal. Previously it was known that common cold viruses had an 8% mortality in nursing homes.

In addition, valuable evidence could be obtained from the autopsies that would improve clinical treatments and could possibly demonstrate the deadly effect of the CDC mandated protocols all hospitals were required to follow, such as the use of respirators and the deadly, kidney-destroying drug remdesivir. The autopsies also demonstrated accumulating medical errors and poor-quality care, as the shielding of doctors in intensive care units from the eyes of family members inevitably leads to poorer quality care as reported by several nurses working in these areas.^[53-55]

As bad as all this was, the very same thing is being done in the case of Covid vaccine deaths—very few complete autopsies have been done to understand why these people died, that is, until recently. Two highly qualified researchers, Dr. Sucharit Bhakdi a microbiologist and highly qualified expert in infectious disease and Dr. Arne Burkhardt, a pathologist who is a widely published authority having been a professor of pathology at several prestigious institutions, recently performed autopsies on 15 people having died after vaccination. What they found explains why so many are dying and experiencing organ damage and deadly blood clots.^[5]

They determined that 14 of the fifteen people died as a result of the vaccines and not of other causes. Dr. Burkhardt, the pathologist, observed widespread evidence of an immune attack on the autopsied individuals’ organs and tissues—especially their heart. This evidence included extensive invasion of small blood vessels with massive numbers of lymphocytes, which cause extensive cell destruction when

unleashed. Other organs, such as the lungs and liver, were observed to have extensive damage as well. These findings indicate the vaccines were causing the body to attack itself with deadly consequences. One can easily see why Anthony Fauci, as well as public health officers and all who are heavily promoting these vaccines, publicly discouraged autopsies on the vaccinated who subsequently died. One can also see that in the case of vaccines, that were essentially untested prior to being approved for the general public, at least the regulatory agencies should have been required to carefully monitor and analyze all serious complications, and certainly deaths, linked to these vaccines. The best way to do that is with complete autopsies.

While we learned important information from these autopsies what is really needed are special studies of the tissues of those who have died after vaccination for the presence of spike protein infiltration throughout the organs and tissues. This would be critical information, as such infiltration would result in severe damage to all tissues and organs involved—especially the heart, the brain, and the immune system. Animal studies have demonstrated this. In these vaccinated individuals the source of these spike proteins would be the injected nanolipid carriers of the spike protein producing mRNA. It is obvious that the government health authorities and pharmaceutical manufacturers of these “vaccines” do not want these critical studies done as the public would be outraged and demand an end to the vaccination program and prosecution of the involved individuals who covered this up.

CONCLUSIONS

We are all living through one of the most drastic changes in our culture, economic system, as well as political system in our nation's history as well as the rest of the world. We have been told that we will never return to “normal” and that a great reset has been designed to create a “new world order”. This has all been outlined by Klaus Schwab, head of the World Economic Forum, in his book on the “Great Reset”.^[66] This book gives a great deal of insight as to the thinking of the utopians who are proud to claim this pandemic “crisis” as their way to usher in a new world. This new world order has been on the drawing boards of the elite manipulators for over a century.^[73,74] In this paper I have concentrated on the devastating effects this has had on the medical care system in the United States, but also includes much of the Western world. In past papers I have discussed the slow erosion of traditional medical care in the United States and how this system has become increasingly bureaucratized and regimented.^[7,8] This process was rapidly accelerating, but the appearance of this, in my opinion, manufactured “pandemic” has transformed our health care system over night.

As you have seen, an unprecedented series of events have taken place within this system. Hospital administrators,

for example, assumed the position of medical dictators, ordering doctors to follow protocols derived not from those having extensive experience in treating this virus, but rather from a medical bureaucracy that has never treated a single COVID-19 patient. The mandated use of respirators on ICU Covid-19 patients, for example, was imposed in all medical systems and dissenting physicians were rapidly removed from their positions as caregivers, despite their demonstration of markedly improved treatment methods. Further, doctors were told to use the drug remdesivir despite its proven toxicity, lack of effectiveness and high complication rate. They were told to use drugs that impaired respiration and mask every patient, despite the patient's impaired breathing. In each case, those who refused to abuse their patients were removed from the hospital and even faced a loss of license—or worse.

For the first time in modern medical history, early medical treatment of these infected patients was ignored nationwide. Studies have shown that early medical treatment was saving 80% of higher number of these infected people when initiated by independent doctors.^[43,44] Early treatment could have saved over 640,000 lives over the course of this “pandemic”. Despite the demonstration of the power of these early treatments, the forces controlling medical care continued this destructive policy.

Families were not allowed to see their loved ones, forcing these very sick individuals in the hospitals to face their deaths alone. To add insult to injury, funerals were limited to a few grieving family members, who were not allowed to even sit together. All the while large stores, such as Walmart and Cosco were allowed to operate with minimal restrictions. Nursing home patients were also not allowed to have family visitations, again being forced to die a lonely death. All the while, in a number of states, the most transparent being in New York state, infected elderly were purposefully transferred from hospitals into nursing homes, resulting in a very high death rates of these nursing home residents. At the beginning of this “pandemic” over 50% of all death were occurring in nursing homes.

Throughout this “pandemic” we have been fed an unending series of lies, distortions and disinformation by the media, the public health officials, medical bureaucracies (CDC, FDA and WHO) and medical associations. Physicians, scientists, and experts in infectious treatments who formed associations designed to develop more effective and safer treatments, were regularly demonized, harassed, shamed, humiliated, and experience a loss of licensure, loss of hospital privileges and, in at least one case, ordered to have a psychiatric examination.^[2,65,71]

Anthony Fauci was given essentially absolute control of all forms of medical care during this event, including insisting that drugs he profited from be used by all treating physicians. He ordered the use of masks, despite at first laughing at the

use of masks to filter a virus. Governors, mayors, and many businesses followed his orders without question.

The draconian measures being used, masking, lockdowns, testing of the uninfected, use of the inaccurate PCR test, social distancing, and contact tracing had been shown previously to be of little or no use during previous pandemics, yet all attempts to reject these methods were to no avail. Some states ignored these draconian orders and had either the same or fewer cases, as well as deaths, as the states with the most strictly enforced measures. Again, no amount of evidence or obvious demonstration along these lines had any effect on ending these socially destructive measures. Even when entire countries, such as Sweden, which avoided all these measures, demonstrated equal rates of infections and hospitalization as nations with the strictest, very draconian measures, no policy change by the controlling institutions occurred. No amount of evidence changed anything.

Experts in the psychology of destructive events, such as economic collapses, major disasters and previous pandemics demonstrated that draconian measures come with an enormous cost in the form of “deaths of despair” and in a dramatic increase in serious psychological disorders. The effects of these pandemic measures on children’s neurodevelopment is catastrophic and to a large extent irreversible.

Over time tens of thousands could die as a result of this damage. Even when these predictions began to appear, the controllers of this “pandemic” continued full steam ahead. Drastic increases in suicides, a rise in obesity, a rise in drug and alcohol use, a worsening of many health measures and a terrifying rise in psychiatric disorders, especially depression and anxiety, were ignored by the officials controlling this event.

We eventually learned that many of the deaths were a result of medical neglect. Individuals with chronic medical conditions, diabetes, cancer, cardiovascular disease, and neurological diseases were no longer being followed properly in their clinics and doctor’s offices. Non-emergency surgeries were put on hold. Many of these patients chose to die at home rather than risk going to the hospitals and many considered hospitals “death houses”.

Records of deaths have shown that there was a rise in deaths among those aged 75 and older, mostly explained by Covid-19 infections, but for those between the ages of 65 to 74, deaths had been increasing well before the pandemic onset.^[69] Between ages of 18 and aged 65 years, records demonstrate a shocking hike in non-Covid-19 deaths. Some of these deaths were explained by a dramatic increase in drug-related deaths, some 20,000 more than 2019. Alcohol related deaths also increased substantially, and homicides increased almost 30% in the 18 to 65-year group.

The head of the insurance company OneAmerica stated that their data indicated that the death rate for individuals aged 18 to 64 had increased 40% over the pre-pandemic period.^[21] Scott Davidson, the company’s CEO, stated that this represented the highest death rate in the history of insurance records, which does extensive data collections on death rates each year. Davidson also noted that this high of a death rate increase has never been seen in the history of death data collection. Previous catastrophes of monumental extent increased death rates no more than 10 percent, 40% is unprecedented.

Dr. Lindsay Weaver, Indiana’s chief medical officer, stated that hospitalizations in Indiana are higher than at any point in the past five years. This is of critical importance since the vaccines were supposed to significantly reduce deaths, but the opposite has happened. Hospitals are being flooded with vaccine complications and people in critical condition from medical neglect caused by the lockdowns and other pandemic measures.^[46,56]

A dramatic number of these people are now dying, with the spike occurring after the vaccines were introduced. The lies flowing from those who have appointed themselves as medical dictators are endless. First, we were told that the lockdown would last only two weeks, they lasted over a year. Then we were told that masks were ineffective and did not need to be worn. Quickly that was reversed. Then we were told the cloth mask was very effective, now it’s not and everyone should be wearing an N95 mask and before that that they should double mask. We were told there was a severe shortage of respirators, then we discover they are sitting unused in warehouses and in city dumps, still in their packing crates. We were informed that the hospitals were filled mostly with the unvaccinated and later found the exact opposite was true the world over. We were told that the vaccine was 95% effective, only to learn that in fact the vaccines cause a progressive erosion of innate immunity.

Upon release of the vaccines, women were told the vaccines were safe during all states of pregnancy, only to find out no studies had been done on safety during pregnancy during the “safety tests” prior to release of the vaccine. We were told that careful testing on volunteers before the EUA approval for public use demonstrated extreme safety of the vaccines, only to learn that these unfortunate subjects were not followed, medical complications caused by the vaccines were not paid for and the media covered this all up.^[67] We also learned that the pharmaceutical makers of the vaccines were told by the FDA that further animal testing was unnecessary (the general public would be the Guinea pigs.) Incredibly, we were told that the Pfizer’s new mRNA vaccines had been approved by the FDA, which was a clever deception, in that another vaccine had approval (comirnaty) and not the one being used, the BioNTech vaccine. The approved comirnaty vaccine

was not available in the United States. The national media told the public that the Pfizer vaccine had been approved and was no longer classed as experimental, a blatant lie. These deadly lies continue. It is time to stop this insanity and bring these people to justice.

Disclaimer

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of the Journal or its management.

REFERENCES

- Abelson R. Buoyed by federal Covid aid, big hospital chains buy up competitors. *The New York Times* Mat 21, 2021 (updated Oct 22, 2022). <https://www.nytimes.com/2021/05/21/health/covid-bailout-hospital-merger.html>
- Albright L. Medical nonconformity and its persecution. Brownstone Institute; <https://brownstone.org/articles/medical-nonconformity-and-its-persecution> [Last accessed on 2022 Feb 06].
- Ausman JI, Blaylock RL. The China Virus. What is the truth? 2021. James I. and Carolyn R. Ausman Education Foundation (AEF), United States.
- Beder A, Buyukkocak U, Sabuncuoglu H, Keskil ZA, Keskil S. Preliminary report on surgical mask induced deoxygenation during major surgery. *Neurocirurgia* 2008;19
- Bhakdi S Presentation of autopsy findings. <https://www.brighteon.com/4b6cc929-f559-4577-b4f8-3b40f0cd2f77> Pathology presentation on findings. <https://pathologie-konferenz.de/en> [Last accessed on 2022 Feb 06].
- Blaylock RL. Covid-19 pandemic: What is the truth? *Surg Neurol Inter* 2021;12(151).
- Blaylock RL. National Health Insurance (Part 1): the socialist nightmare. Aug 19, 2009. <https://haciendapublishing.com/national-health-insurance-part-i-the-socialist-nightmare-by-russell-l-blaylock-md> [Last accessed on 2022 Feb 06].
- Blaylock RL. Regimentation in medicine and its human price (part 1 & 2) Hacienda publishing. March 20, 2015. <https://haciendapublishing.com/regimentation-in-medicine-and-its-human-price-part-2-by-russell-l-blaylock-md> [Last accessed on 2022 Feb 06].
- Blaylock RL. When rejecting orthodoxy becomes a mental illness. Hacienda Publishing. Aug 15, 2013. <https://haciendapublishing.com/when-rejecting-orthodoxy-becomes-a-mental-illness-by-russell-l-blaylock-m-d> [Last accessed on 2022 Feb 06].
- Bloche MG. Corporate takeover of Teaching Hospitals. Georgetown Univ Law Center. 1992, <https://scholarship.law.georgetown.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1731&context=facpub> [Last accessed on 2022 Feb 06].
- Bosh X, Ross JS. Ghostwriting: Research misconduct, plagiarism, or Fool's gold. *Amer J Med* 2012;125(4):324-6.
- Breggin PR, Breggin GR. Top Medical Journals Sell their Souls. Breggin PR, Breggin GR. Covid-19 and the Global Predators: We are the Prey. Lake Edge Press, Ithaca, NY, 2021. Pp285-292.
- Breggin, p133 [Last accessed on 2022 Feb 06].
- Bulik BS, The top 10 ad spenders in Big Pharma for 2020. *Fierce Pharma* Apr 19,2021. <https://www.fiercepharma.com/special-report/top-10-ad-spenders-big-pharma-for-2020> [Last accessed on 2022 Feb 06].
- Children's Health Defense Team. Harvard experts critique cozy FDA-Pharma relationship. *The Defender*, Jan 28, 29020.
- Chughtai AA, Stelzer-Braid S, Rawlinson W, Pontivivi G, Wang Q, Pan Y et al. Contamination by respiratory viruses on outer surface of medical mask used by hospital healthcare workers. *BMC Infect Dis* 2019; Article number 491.
- Coleman-Lochner L. U.S. Hospitals pushed to financial ruin as nurses quit during pandemic. *Bloomberg*, Dec 21, 2021. <https://www.bloomberg.com/news/articles/2021-12-21/u-s-hospitals-pushed-to-financial-ruin-as-nurses-quit-en-masse> [Last accessed on 2022 Feb 06].
- D'Souza K. Pandemic effects may have lowered baby's IQs, study says. *EdSource* <https://edsources.org/2021/pandemic-may-have-lowered-baby-iq-study-says/661285>. [Last accessed on 2022 Feb 06].
- Davis GG, Williamson AK. Risk of covid-19 transmission during autopsy. *Arch Path Lab Med* 2020;144(12):1445a-1445.
- Department of Health and Human Services: Part 1. Overview Information. <https://grants.nih.gov/grants/guide/rfa-files/RFA-HD-20-013.html> [Last accessed on 2022 Feb 06].
- Durden T, Life Insurance CEO says deaths up 40% among those aged 18 to 64. *Tyler Durden Report* Jan 3, 2022.
- Elder C, Schroder AS, Aepfelbacher M, Fitzek A, Heinemann A, Heinrich F, et al Dying with SARS-CoV-2 infection an autopsy study of the first consecutive 80 cases in Hamberg, Germany. *Inter J Legal Med* 2020;134:1275-84.
- Front Line Covid Critical Care Alliance <https://covid19criticalcare.com> [Last accessed on 2022 Feb 06].
- Gueriero M. Restriction of autopsies during the Covid-19 epidemic in Italy. Prudence or fear? *Pathologica* 2020;112:172-3.
- Hope JR. Sudden death by "hot lot"—Dr. Michael Yeadon sounds the alarm. *The Desert review*. Jan 24, 2022.
- Huff E. Idaho doctor reports "20 times increase" in cancer among those "vaccinated" for covid. *Natural News* Sept 14, 2021. <https://www.naturalnews.com/2021-09-14-idaho-doctor-20times-increase-cancer-vaccinated-covid.html> [Last accessed on 2022 Feb 06].
- Ioannou P, Karakonstantis S, Astrinaki E, Saplamiidou S, Vitsaxaki E, Hamilos G et al. Transmission of SARS-CoV-2 variant B.1.1.7 among vaccinated health care workers. *Infect Dis* 2021;1-4.
- James Thorpe interview by Dr. Steve Kirsch. *Rumble* <https://rumble.com/vru732-dr.-james-thorpe-on-medical-censorship.html> [Last accessed on 2022 Feb 06].
- Jiang H, Mei Y-F. SARS-CoV-2 spike protein impairs DNA damage repair and inhibits V(D)J recombination in vitro. *Viruses* 2021;13:2056. <http://doi.org/10.3390/10.3390/v13102056>
- Jimenez J, Vigdor N. Covid-19 news: Over 150 Texas hospital workers are fired or resign over vaccine mandates. *The New York Times* June 22, 2021. <https://www.nytimes.com/live/2021/06/22/world/covid-vaccine-coronavirus-mask> [Last

- accessed on 2022 Feb 06].
31. Katz E. Postal service seeks temporary exemption from Biden's vaccine-or-test mandate. Government Executive Jan 22, 2022. <https://www.govexec.com/workforce/2022/01/postal-service-seeks-temporary-exemption-bidens-vaccine-or-test-mandate/360376> [Last accessed on 2022 Feb 06].
 32. Kennedy R, Jr The Real Anthony Fauci. Bill Gates, Big Pharma, and the Global War on Democracy and Public Health. Skyhorse Publishing, 2021, pg 24-29
 33. Kennedy, RF, Jr pp 24,25
 34. Kennedy, RF, Jr pp 26-30.
 35. Kennedy, RF, Jr pg 32.
 36. Kennedy, RF, Jr pp 35-56
 37. Kennedy, RF, Jr pp 47-56
 38. Kennedy, RF, Jr pg 135
 39. Kennedy, RF, Jr pg 217
 40. Lee M. University of Florida finds dangerous pathogens on children's face mask. NTD https://www.ntd.com/university-of-florida-lab-finds-dangerous-pathogens-on-childrens-face-masks_630275.html [Last accessed on 2022 Feb 06].
 41. Liu Q, Wang RS, Qu GQ, Wang YY, Liu P, Zhu YZ et al. Gross examination report of a Covid-19 death autopsy. Fa Yi Xue Za Zhi 2020;36:21-23.
 42. Loffredo J. Fully vaccinated are Covid 'Superspreaders,' Says inventor of mRNA technology. <https://childrenshealthdefense.org/defender/justin-Williams-Robert-Malone-fully-vaccinated-covid-super-spreaders> [Last accessed on 2022 Feb 06].
 43. Marik PE, Kory P, Varon J, Iglesias J, Meduri GU. MATH+ protocol for the treatment of SARS-CoV-2 infection: the scientific rationale. Exp rev Ant-infective Ther 2020: <https://doi.org/10.1080/14787210.2020.1808462>
 44. McCullough P, Kelly R, Ruocco G, Lerma E, Tumlin J, Wheeland KR et al. Pathophysiological basis and rationale for early outpatient treatment of SARS-CoV-2 (COVID-19) Infection. Amer J Med 2021;134:16-22.
 45. McCullough P. Study: Fully vaccinated healthcare workers carry 251 times viral load, pose threat to unvaccinated patients, Co-workers. The Defender 08/23/21.
 46. McCullough P. "We're in the middle of a major biological catastrophe": Covid expert Dr. Peter McCullough. Oct 6, 2021. https://www.lifesitenews.com/news/were-in-the-middle-of-a-major-biological-catastrophe-top-covid-doc-mccullough/?_kx=9EtuqemhhFXJ1kgCo9W3xUNfwrkqB5nT7V2H15fUnA%3D.WXNMR7 [Last accessed on 2022 Feb 06].
 47. McGovern C. Thousands report developing abnormal tumors following Covid shots. LifeSite News Nov 1, 2021. <https://www.lifesitenews.com/news/thousands-report-developing-abnormal-tumors-following-covid-shots> [Last accessed on 2022 Feb 06].
 48. Mercola J. Bill Gates and Anthony Fauci: a 'formidable, nefarious' partnership. Mercola.com <https://childrenshealthdefense.org/defender/rfk-jr-the-real-anthony-fauci-bill-gates> [Last accessed on 2022 Feb 06].
 49. Moffatt B, Elliott C. Ghost Marketing: Pharmaceutical companies and ghostwritten journal articles. Persp Biol Med 2007;50(1):18-31.
 50. Mulvany, C Covid-19 exacerbates bankruptcy for at-risk hospitals. Health Care Financial Management Association. Nov 9, 2020.
 51. Muoio D. How many employees have hospitals lost to vaccine mandates? Here are the numbers so far. Fierce Healthcare Jan 13, 2022. <https://www.fiercehealthcare.com/hospitals/how-many-employees-have-hospitals-lost-to-vaccine-mandates-numbers-so-far> [Last accessed on 2022 Feb 06].
 52. Nalivaeva NN, Turner AJ, Zhuravin IA. Role of prenatal hypoxia in brain development, cognitive functions, and neurodegeneration. Front Neurosci 2018; doi:10.3389/fnins.2018.00825.
 53. Nicole Sirotek shares what she saw on the front lines in NYC. # Murder. <https://rumble.com/vt7tnf-registered-nurse-nicole-sirotek-shares-what-she-saw-on-the-front-lines-in-n.html> [Last accessed on 2022 Feb 06].
 54. Noether M, Mat S. Hospital merger benefits: Views from hospital leaders and econometric analysis. Amer Hospital Assoc. Charles Rivers Associates, Jan 2017. <https://www.aha.org/guidesreports/2017-01-24-hospital-merger-benefits-views-hospital-leaders-and-econometric-analysis> [Last accessed on 2022 Feb 06].
 55. Nurse Colette Martin testimony to Louisiana House of Representatives. <https://www.youtube.com/watch?v=cBwnIRUav5I> [Last accessed on 2022 Feb 06].
 56. Nurse Dani: It's the Covid-19 hospital protocols are killing people. <https://rumble.com/vqs1v6-nurse-dani-its-the-covid-19-hospital-protocols-are-killing-people.html> [Last accessed on 2022 Feb 06].
 57. Parpia R. Mayo Clinic fires 700 employees for refusing to get Covid-19 vaccinations. The Vaccine Reaction <https://thevaccinereaction.org/2022/01/mayo-clinic-fires-700-employees-for-refusing-to-get-covid-19-vaccinations> [Last accessed on 2022 Feb 06].
 58. Pomara C, Li Volti G, Cappello F. Covid-19 deaths: are we sure it is pneumonia? Please, autopsy, autopsy, autopsy! J Clin Med 2020. [Hhp://doi.org/10.3390/jcm9051259](https://doi.org/10.3390/jcm9051259).
 59. Post Editorial Board Facebook admits the truth: "Fact checks" are just (lefty) opinion. New York Post Dec 14, 2021. <https://nypost.com/2021/12/14/facebook-admits-the-truth-fact-checks-are-really-just-lefty-opinion> [Last accessed on 2022 Feb 06].
 60. Rancourt DG. Mask don't work. A review of science relevant to the covid-19 social policy. <https://archive.org/details/covid-censorship-at-research-gate-2> [Last accessed on 2022 Feb 06].
 61. Redshaw M. As reports of injuries after Covid vaccines near 1 million mark, CDC, FDA clear Pfizer, Moderna boosters for all adults. The Defender 11/19/21.
 62. Roche D. Members of Congress and their staff are exempt from Biden's vaccine mandate. Newsweek 9/10/21 Boston Herald Editorial Staff. Editorial: Political elites exempt from vax mandates. Boston Herald Sept 14, 2021.
 63. Ross E. How drug companies' PR tactics skew the presentation of medical research. The Guardian. <https://www.theguardian.com/science/2011/may/20/drug-companies-ghost-writing-journalism> [Last accessed on 2022 Feb 06].
 64. Saul S. Ghostwriters used in Vioxx studies, article says. New York Times, April 15, 2008. https://www.fpparchive.org/media/documents/public_policy/Ghostwriters%20Used%20in%20Vioxx%20studies%20Stephanie%20Saul%20Apr%202015,%202008%20The%20New%20Times.pdf [Last accessed on 2022 Feb 06].
 65. Saxena V. Doctors loses medical license, Ordered to have Psych

- Eval for Ivermectin Scrits, Sharing Covid “misinformation”. BRP News Available from: <https://bizpacreview.com/2022/01/16/doctor-loses-license-ordered-to-have-psych-eval-for-prescribing-ivermectin-sharing-covid-falsehoods-1189313>. [Last accessed on 2022 Feb 06].
66. Schwab K, Malleret T, The Covid-19 Pandemic and the Great Reset. Forum Publishing 2020 World Economic Forum, Cologne/Geneva.
 67. Sen. Ron Johnson on Covid-19 vaccine injuries to test subjects. <https://www.youtube.com/watch?v=6mxqC9SiRh8> [Last accessed on 2022 Feb 06].
 68. Spermhake J-P. Autopsies of Covid-19 deceased? Absolutely!. *Legal Med* 2020 <https://doi.org/10.1016/j.legalmed.2020.101769>.
 69. Svab P. Non-Covid death spike in Americans aged 18-49. *The Epoch Times* Jan 26-Feb 1, 2022.
 70. US Medical, Scientific, Patient and Civic Organization Funding Report: Pfizer: Fourth Quarter 2010. https://cdn.pfizer.com/pfizercom/responsibility/grants_contributions/pfizer_us_grants_cc_q4_2010.pdf [Last accessed on 2022 Feb 06].
 71. Vivek Saxena. Doctors loses license, ordered to have psych eval for Ivermectin scrits, sharing Covid ‘misinformation’. BRP News. <https://www.bizpacreview.com/2022/01/16/doctor-loses-license-ordered-to-have-psych-eval-for-prescribing-ivermectin-sharing-covid-falsehoods-1189313>
 72. Westendorf AM et al. Hypoxia enhances immunosuppression by inhibiting CD4+ effector T cell function and promoting Treg activity. *Cell Physiol Biochem* 2017;41:1271-84.
 73. Wood PM. *Technocracy: The Hard Road to World Order*. Coherent Publishing, 2018
 74. Wood PM. *Technocracy Rising: The Trojan Horse of Global Transformation*, Coherent Publishing, 2015

How to cite this article: Blaylock RL. COVID UPDATE: What is the truth? *Surg Neurol Int* 2022;13:167.

PRODUKTIE 19

13 Jul, 2022 20:34 / [Home](#) / [World News](#)

WHO demands return of Covid masks

Dr. Tedros Adhanom Ghebreyesus said the coronavirus pandemic was nowhere near over



FILE PHOTO: Tedros Adhanom Ghebreyesus attends a press conference at the WHO headquarters in Geneva, Switzerland, December 20, 2021 © AP / Fabrice Coffrini

With cases of Covid-19 trending upward globally, World Health Organization Director General Dr. Tedros Adhanom Ghebreyesus called on Tuesday for authorities to bring back masking, ventilation, and social distancing.

Speaking during a weekly briefing, Tedros stated that *“the virus is running freely, and countries are not effectively managing the disease.”* With the WHO concluding last week that the virus remains a ‘Public Health Emergency of International Concern’, Tedros asserted that the pandemic was *“nowhere near over.”*

During the week of July 4-10, 2022, over 5.7 million new cases of Covid-19 were reported, a 6% increase compared to the previous week. Deaths, however, have remained relatively flat throughout this summer, with just over 9,800 reported in the week leading up to July 4, five times fewer than the same week last year.

[READ MORE: Hong Kong unveils Covid quarantine bracelets](#)

Tedros called on national authorities to step up their efforts in *“communicating risk”* to the public, and called for a return of *“public health social measures like masking, distancing and ventilation.”*

Mask mandates and social distancing requirements were largely abandoned earlier this year, although some countries – among them China and South Korea – still require face masks in most public settings.

Top stories



China conducts military exercises amid tensions with US

Biden gets another positive Covid-19 test

Elite battalion of Zelensky destroyed – Russia

US congressman calls critic ‘retarded f***ing dips**t’

US lawmakers introduce bill to arm Taiwan

Iraqi protesters storm parliament again (VIDEO)

Russia slams Norwegian diplomat for xenophobia

New York declares monkeypox emergency

Subscribe to RT newsletter to get news highlights of the day right in your mailbox

E-mail

We offer you the possibility to receive RT's news highlights every Monday, Wednesday and Friday by email.

Subscribe

RT Features



PRODUKTIE 20

**COMMONWEALTH OF KENTUCKY
BOONE CIRCUIT COURT
DIVISION I
CASE NO. 20-CI-00678**

RIDGEWAY PROPERTIES, LLC
dba Beans Café & Bakery

PLAINTIFF

AND

COMMONWEALTH OF KENTUCKY,
ex rel. ATTORNEY GENERAL DANIEL CAMERON

**INTERVENING
PLAINTIFF**

VS.

HON. ANDREW BESHEAR, GOVERNOR,
COMMONWEALTH OF KENTUCKY, *et al.*,

DEFENDANTS

JUDGMENT AND ORDER

This matter is before the Court for final adjudication. But it comes thus in a bit of a tangle. Despite its recent vintage, this case has an appellate and procedural history that is both extensive and unusual.¹ The Court conducted an evidentiary hearing on May 17, 2021, and

¹ On July 2, 2020, this Court entered a Temporary Injunction against Governor Beshear and other executive agencies enjoining the enforcement of certain orders issued in the wake of the Governor's declaration of emergency. That same day, the Court also allowed Attorney General Daniel Cameron to intervene as Plaintiff on behalf of the people of the Commonwealth of Kentucky, who sought a wider injunction against all of the Governor's orders as offensive to their constitutional rights. Following this Court's initial Order enjoining enforcement, Governor Beshear and other executive agencies petitioned the Kentucky Court of Appeals for a writ of prohibition to prohibit the grant of such relief. That case was captioned, *Hon. Andrew Beshear, et al., v. Hon. Richard A. Brueggemann, et al.*, Ky. Ct. App. No. 2020-CA-834-OA. On July 13, 2020, in an opinion by the Hon. Glenn Acree, the Kentucky Court of Appeals denied the writ. Defendants then filed an original action in the Kentucky Supreme Court, petitioning that it mandate Judge Acree to prohibit this Court from acting, or otherwise for the higher court to directly prohibit this Court from acting. That case was captioned, *Hon. Andrew Beshear, et al., v. Hon. Glenn E. Acree, et al.*, Ky. S. Ct. 2020-SC-313-OA.

On July 16, 2020, this Court held an evidentiary hearing on whether further temporary injunctions should issue. At the conclusion of that hearing, this Court stated that it was granting the full relief sought by Plaintiffs and Intervening Plaintiff, *ex rel.* Attorney General Daniel Cameron, and that an order with its findings and conclusions would be entered in due course. In an Order entered July 17, 2020, the Kentucky Supreme Court directed this Court to proceed and issue the findings of fact and conclusions of law it found appropriate. However, the Supreme Court also stayed all injunctions previously imposed in the matter and prohibited the issuance of any new injunctive relief "until the full record of proceedings below is reviewed . . . and [the Kentucky Supreme Court] issues a final order."

On July 20, 2020, this Court entered an Order with findings and conclusions that all of the emergency orders issued by the governor and executive agencies violated the constitutional rights of Kentuckians and that, but for the Kentucky Supreme Court's July 17, 2020 Order, would have been enjoined during the pendency of this action. The Kentucky Supreme Court then considered the matter as on appeal in the case captioned as a writ.

pursuant to an agreed briefing schedule, took all remaining matters under submission on May 25, 2021.

PROCEDURAL AND FACTUAL BACKGROUND

On March 6, 2020, Governor Beshear declared that the 2019 coronavirus² constituted an emergency in the Commonwealth, invoking KRS Chapter 39A, and began issuing a string of executive orders. Among these, he ordered the closure of all businesses except for specific pursuits that he deemed essential for life.³ Through the Cabinet for Health and Family Services (“CHFS”), he ordered the closure of churches and houses of worship.⁴ Following his directives, CHFS prohibited individuals from meeting together in certain types of mass gatherings, later allowing meetings only in numbers not exceeding ten persons.⁵ The Governor prohibited citizens from peaceably assembling for the purpose of petitioning a redress of these grievances but allowed and even joined assemblies for other causes.⁶ He had prohibited travel, with limited exceptions, and decreed those daring to travel across state lines in violation of his order must quarantine for 14 days.⁷ He ordered all citizens to remain at home unless engaged in a pursuit deemed by the government to be essential for life.⁸ The CHFS ordered hospitals and doctors to cease providing any health care, including surgeries, unless said treatment was deemed emergent

Additionally, due to dismissals on side of both Plaintiffs and Defendants, this case is no longer captioned as *Kentucky Speedway, Inc., et al., v. Northern Kentucky Independent Health District, et al.*

² Known as SARS-COV-2, commonly referred to as “Covid-19.”

³ Ky. Exec. Order No. 2020-246, Gov.’s Resp., p. 4, Available at https://governor.ky.gov/attachments/20200322_Executive-Order_2020-246_Retail.pdf.

⁴ *Id.* CHFS Order, Mar. 19, 2020, Gov.’s Resp., p. 4, available at https://governor.ky.gov/attachments/20200319_Order_Mass-Gatherings.pdf.

⁵ Order of CFHS Re: Mass Gatherings, available at https://governor.ky.gov/attachments/20200319_Order_Mass-Gatherings.pdf. See also, Gov. Beshear Updates Kentuckians on the Fight to Defeat COVID-19, available at <https://kentucky.gov/Pages/Activity-stream.aspx?n=GovernorBeshear&prId=168>.

⁶ Testimony of Dr. Stack, V.R. 07/16/2020, circa 07:42:00; and Exh. 31 to July 16, 2020 hearing.

⁷ Ky. Exec. Order No. 2020-258, Available at https://governor.ky.gov/attachments/20200330_Executive-Order_2020-258_Out-of-State-Travel.pdf; See also Ky. Exec. Order No. 2020-266. Available at https://governor.ky.gov/attachments/20200402_Executive-Order_2020-266_State-of-Emergency.pdf; and Ky. Exec. Order No. 2020-315, available at https://governor.ky.gov/attachments/20200506_Executive-Order_2020-315_Travel.pdf.

⁸ <https://kentucky.gov/Pages/Activity-stream.aspx?n=GovernorBeshear&prId=10>.

(that is, likely to result in serious, irreparable harm if not provided within 24 hours), thereby prohibiting the people from access to procedures such as cancer-screenings, dental care and physical therapy.⁹ The Governor ordered everyone in Kentucky to wear masks and threatened fines and penalties for violations.¹⁰

At first, the Governor indicated the emergency would last for just two weeks¹¹—fourteen days to flatten the curve. But fourteen months later, the Governor insists his wielding of broad emergency powers must continue. At the hearing on May 17, 2021, the Commissioner of Public Health and Governor’s health advisor, Dr. Steven Stack, testified that he could not specify an incidence rate or any precise conditions that would have to be in place in order to end the state of emergency and remove all the mandates.¹² That, he said, was something only the Governor could answer.¹³

In July 2020, for purposes of CR 65.04, this Court found the Governor’s orders constitutionally offensive on grounds that KRS Chapter 39A attempted to delegate functions constitutionally reserved to the legislative branch, and also for violating the inherent and unalienable rights of Kentucky’s citizens. In *Beshear v. Acree*, 615 S.W.3d 780 (Ky. 2020),¹⁴ the Kentucky Supreme Court reversed this Court’s grant of temporary injunctive relief and held the delegation under KRS Chapter 39A to be constitutional.¹⁵ The Kentucky Supreme Court

⁹ See Ky. Exec. Order No. 2020-323, Available at https://governor.ky.gov/attachments/20200323_Directive_Elective-Procedures.pdf.

¹⁰ Ky. Exec. Order No. 2020-586, available at https://governor.ky.gov/attachments/20200709_Executive-Order_State-of-Emergency.pdf.

¹¹ See Com. ex rel. Resp., p. 2, fn. 3, citing “Gov. Beshear Tightens Restrictions,” <https://kentucky.gov/Pages/Activity-stream.aspx?n=GovernorBeshear&prId=104>, quoting the Governor as stating, “Kentucky—these next two weeks are about us . . . doing everything we can to blunt the curve” (last accessed May 30, 2021).

¹² V.R. 05/17/2021, *circa* 03:28:00; 03:47:00

¹³ *Id.*; 04:06:30.

¹⁴ See footnote 1, explaining that although *Acree* commenced as a separate original action on petition for a writ in response to denial of a writ, it also effectively resulted in an appeal of this Court’s preliminary orders.

¹⁵ *Id.*, at 805-813.

further held that the challenged orders were not unconstitutionally arbitrary under §§ 1 and 2 of Kentucky's Constitution,¹⁶ except for an order which had prohibited family members from sitting together on outdoor stadium seating at race-tracks.¹⁷ As to the latter, because the Governor had revised that order to remove the offending prohibition, the Kentucky Supreme Court found it to be moot.¹⁸

The landscape currently, however, has changed. Now, it is Defendants who seek to invalidate certain portions of KRS Chapter 39A on constitutional grounds. Plaintiff and Intervening Plaintiff assert that the Governor's continuing orders violate those Kentucky Statutes. During the 2021 legislative session, the General Assembly amended KRS Chapter 39A to limit the extent and duration of its legislative delegation to the Governor. The specific legislation at issue includes Senate Bill 1 (2021 RS SB1), Senate Bill 2 (2021 RS SB2), House Bill 1 (2021 RS HB1), and House Joint Resolution 77 (2021 RS HJR 77) (all collectively referred to hereinafter as the "New Legislation" or the "Acts"). The Governor vetoed each of these measures, after which the General Assembly overrode his veto with votes of overwhelming majorities.¹⁹ All of the New Legislation contained severability clauses, and also emergency clauses resulting in the Acts going into effect immediately.

Senate Bill 1 amended Chapter 39A in several ways. Section 2 amends KRS 39A.090 to impose a 30-day limit on the duration of any executive orders or administrative regulations that purport to restrict in-person meetings or social gatherings, or thereby impairs the operation of churches, places of worship, schools, private businesses, local governments, nonprofit

¹⁶ *Id.*, at 815-829; the Court specifically addressed the economic rights of Plaintiffs but did not address in its analysis the rights under Section 1 of the citizens at large who are represented by the Commonwealth, *ex rel.* Attorney General Daniel Cameron .

¹⁷ *Id.*, at 825.

¹⁸ *Id.*

¹⁹ For example, Senate Bill 1 overrode the Governor's veto by vote of 69-20 in the house, and 29-8 in the Senate; and Senate Bill 2 overrode the Governor's veto in the House 72-22, and 29-8 in the Senate.

organizations, and other political, religious or social gatherings. After 30 days, the rules imposed by executive order will expire unless the General Assembly shall vote to extend it.²⁰ Section 3 of Senate Bill 1 requires reporting on the use of any public funds in connection with an emergency order.²¹ Section 4 limits the delegation that would allow the Governor to suspend statutes or regulations by requiring that he specifically identify the law being suspended, and also conditions any suspension of law on the written approval of the Attorney General.²²

One of the provisions in Senate Bill 2 requires the Cabinet for Health and Family Services to follow the procedures for promulgating regulations (rather than allowing it to merely issue rules) concerning the exercise of its authority relating to the invasion of infectious or contagious disease.²³ It also imposes a 30-day limit similar to that in Senate Bill 1.

House Bill 1 provides that any business or other organization, be it for-profit or nonprofit, as well as local government, including schools and school districts, “may remain open and fully operational for in-person services,” so long as the business or organization adopts a plan that follows *either* the Governor’s order or guidance issued by the Center for Disease Control (“CDC”).²⁴ In other words, it allows the organization to choose the least restrictive option.

House Joint Resolution 77 expressed approval of 56 of the executive’s orders and regulations, 24 of which it provided shall continue for 90 additional days, and 32 of which it extended for 30 additional days.²⁵ Otherwise, it provided that “[a]ll COVID-19 related executive orders, administrative regulations, other directives issued by the Governor or pursuant to his authority, or agencies or boards under the Governor’s authority, not specifically extended by this

²⁰ 2021 Ky. Acts ch. 6 § 2.

²¹ *Id.*, at § 3.

²² *Id.*, at § 4.

²³ 2021 Ky. Acts ch. 7 § 4.

²⁴ 2021 Ky. Acts ch. 3 § 1.

²⁵ 2021 Ky. Acts ch. 168, §§ 2, 3.

Act are of no further force or effect as of the effective date of this Act.”²⁶ Among the Governor’s orders that the General Assembly expressly did not extend was his decree that all Kentuckians wear a mask.

ARGUMENTS PRESENTED²⁷

Based on the New Legislation, Plaintiff and Intervening Plaintiff seek a declaration that all of the Governor’s emergency orders in conflict with the Acts are void as a matter of law, and also seek a permanent injunction compelling Defendants to comply. Further, they point to existing data from various states to show that the Governor’s mandates have had no appreciable effect on fighting the coronavirus and that there is no justification in fact for the same to continue.

Plaintiff presented testimony from Richard Hayhoe, owner of Ridgeway Properties, LLC, to show he is suffering continuing harm. Plaintiff, as to his business, argues the data shows there to be neither any need nor rational basis for certain measures the Governor continues to order and impose, including the mask mandate, social distancing, capacity limitations, and time limitations for serving customers. Plaintiff also presented testimony from Dr. Molly Rutherford and Stephen E. Petty, P.E., CIH., who testified as an expert as a certified industrial hygienist.

On the other side, Defendants filed a cross-motion for summary judgment asking the Court to declare the New Legislation unconstitutional. Defendants argue that the Governor cannot be in violation of the New Legislation because he obtained an injunction from the Franklin Circuit to enjoin application of those Acts and, thus, the Governor’s orders remain in effect. Defendants also insist that, even without the ruling in Franklin Circuit, the Governor

²⁶ *Id.*, at § 1.

²⁷ Many arguments were presented and, although not recited, were considered. Some arguments or evidence presented may be recited only in the analysis portion of this Order.

cannot be limited by the New Legislation. According to Defendants, the result is an unconstitutional encroachment by the legislative branch.²⁸ Defendants presented testimony of Dr. Steven Stack, the Commissioner of Public Health and Governor's health advisor.

Defendants also argue that the harms alleged by Plaintiffs are either non-existent, moot, or have already been decreed by the Kentucky Supreme Court as insufficient to warrant injunctive relief, and that the same is the law of the case. They further point out that the Governor's emergency orders have undergone numerous revisions and that, under his current stated intention, both the capacity limitations on businesses will be removed, and the mask mandate imposed on all Kentuckians lifted, on June 11, 2021—but not in all settings.

Contra the arguments presented by Defendants, *ex rel.* Attorney General Daniel Cameron, as Intervening Plaintiff on behalf of the people of the Commonwealth, insists that the decision in the Franklin Circuit does not effect this case, that the law of the case from *Acree* does not apply to the relief sought and, consequently, that this Court should not delay to reach the merits of the claims and constitutional questions before it. Intervening Plaintiff argues the General Assembly passed the Acts as part of its legislative powers and, because the same are constitutionally sound, urges this Court to deny Defendants' cross-motion and to order Defendants to comply with the New Legislation.

ANALYSIS

No one in the civil realm, however high their office, is above the law. It was for this principle that English Barons assembled at Runnemede meadow and, on June 15, 1215, forced King John to sign the *Magna Carta*, within which he avowed the Crown would abide thereby in

²⁸ Defendants' specific arguments on this as to each of the Acts will be more fully addressed in the analysis section of this Order below.

perpetuity.²⁹ Even after he signed, the Barons refused allegiance until he formally affixed upon it the Seal of England. The great charter of Kentucky is its Constitution. And its guarantees are sealed by an oath, one that applies to all offices in all branches. Before a person may take any office, regardless of whether the person is elected or appointed, the individual, among other avowals, must formally declare:

I do solemnly swear (or affirm . . .) that I will support the Constitution of the United States and the Constitution of this Commonwealth, and be faithful and true . . . so help me God.³⁰

The Constitution places limits on what government may do to (and for) its citizens. All the laws enacted by the General Assembly, and all laws enforced by the executive, are subject to those limits. The result, as John Adams put it, is *a government of laws, not men*. No branch, not even all branches acting in concert, can legitimately change any provision of the Constitution. Only by direct vote or convention **of the people**—whose rights the Constitution exists to protect—can any change occur.³¹ The text and meaning of the Constitution is fixed, as its framers make clear in § 26:

To guard against transgression of the high powers which we have delegated, We Declare that every thing in this Bill of Rights is excepted out of the general powers of government, and shall forever remain inviolate; and all laws contrary thereto, or contrary to this Constitution, shall be void.³²

Words mean things, and the meaning of the words in our Constitution is clear. The legislature alone enacts the laws. “The legislative power shall be vested in a House of Representatives and a Senate”³³ The executive carries out the law. “The supreme executive

²⁹ See, generally, *Magna Carta*, § 1 (“We furthermore grant and give to all the freemen of our realm for ourselves and our heirs in perpetuity the liberties written below to have and to hold to them and their heirs from us and our heirs in perpetuity”), quoted from National Archives, *Magna Carta Translation*, <https://www.archives.gov/exhibits/featured-documents/magna-carta/translation.html>, last accessed, May 29, 2021.

³⁰ KY. CONST. § 228.

³¹ KY. CONST. §§ 256, 258.

³² KY. CONST. § 26.

³³ Ky. Const. § 29.

power of the Commonwealth shall be vested in . . . the ‘Governor . . .’ who “shall take care that the laws are faithfully executed.”³⁴ And the judicial branch adjudicates controversies according to the law.³⁵ No branch “shall exercise any power properly belonging to either of the others, except in the instances . . . expressly directed or permitted [within the text of the Constitution].”³⁶

All parties to this action agree on one point, namely, that the Constitution has been violated. The only dispute, when boiled down, is by which it is being transgressed.

A. Law-of-the-Case and Comity

Under the law-of-the-case doctrine, trial courts are not permitted to reopen questions of law that have been decided by an appellate court in the very same case. “A final decision of [an appellate court], *whether right or wrong*, is the law of the case and is conclusive”³⁷

Nevertheless, the law-of-the-case rule is not without exceptions. An exception exists in the “limited situation where the controlling law changes after reversal . . . but prior to a subsequent re-trial.”³⁸ Further, the law-of-the-case doctrine applies to questions of law actually decided, and not *dicta*.³⁹ And the doctrine applies only to determinations made based upon law and not questions of fact.⁴⁰

In *Acree*, the Kentucky Supreme Court held that the legislature can delegate to the Governor emergency rulemaking authority under 39A.⁴¹ That determination is the law of this case. However, Plaintiff and Intervening Plaintiff seek relief based upon intervening changes in

³⁴ KY. CONST. §§ 69, 81.

³⁵ KY. CONST. § 109.

³⁶ KY. CONST. § 28.

³⁷ *Ragland v. DiGiuro*, 352 S.W.3d 908, 914–15 (Ky. App. 2010); quoting, *Williamson v. Commonwealth*, 767 S.W.2d 323, 325 (Ky.1989) (emphasis original).

³⁸ *St. Clair v. Commonwealth*, 451 S.W.3d 597, 612–13 (Ky. 2014); accord, *Brown v. Commonwealth*, 313 S.W.3d 577, 610 (Ky. 2010), *Sherley v. Commonwealth*, 889 S.W.2d 794 (Ky. 1994).

³⁹ *Johnson, True & Guarnieri, LLP*, 538 S.W.3d 901, 918 (Ky. App. 2017).

⁴⁰ *Inman v. Inman*, 648 S.W.2d 847, 849 (Ky. 1982).

⁴¹ *Acree*, 615 S.W.3d, at 805-13.

the law since *Acree* was decided. In short, they contend that, by those changes, the legislature has limited some of the power previously granted. Plaintiff and Intervening Plaintiff insist that if the General Assembly can delegate that power, it can also limit the extent of its delegation or revoke it entirely. Although the Court found the Defendants' arguments concerning the law-of-the-case a difficult question, it is persuaded that it does not apply to the issues remaining for decision. In addition to the reasons recited herein, the Court is persuaded otherwise by the arguments presented in *ex rel.* Attorney General Daniel Cameron's Post Hearing Reply.⁴² Although Plaintiff was a party plaintiff at the time *Acree* was decided, the law has nonetheless changed, new facts are presented, and the matter is before this Court for final judgment, not temporary relief.

Plaintiff presents evidence of new facts not offered or considered at the preliminary injunction hearing. Intervening Plaintiff provides factual data not existing in July 2020 and concerning which this Court can take judicial notice. The essential questions here are, first, whether the Acts are constitutional. And, if so, in light of the New Legislation and new facts, whether the Governor may continue to impose emergency orders that exceed the limits expressly set under the new law. Defendants argue that the Court may not address that question, entertain permanent injunctive relief, or address the merits in any manner inconsistent with the result reached in the Franklin Circuit.

⁴² See pp. 1-9. However, the Court does correct a statement in the Attorney General's argument on page 9, which states that the decision in *Acree* "in no way precludes another Plaintiff, with different facts, in an altogether different legal landscape, from prevailing on its request for a permanent injunction." The current Plaintiff was in fact a Plaintiff at the time *Acree* was decided. However, this Court did not grant a temporary injunction to the current Plaintiff on the economic grounds presented by it but, rather, on the grounds presented by *ex rel.* Attorney General Cameron on behalf of all Kentucky citizens. In fact, this Court expressly held that Plaintiff did not show likelihood that it would suffer irreparable harm in the same way the other Plaintiffs had and that it was not granting injunctive relief on that basis. Consequently, the discussion in *Acree* concerning irreparable harm does not apply. Furthermore, this is on for final judgment and the elements required for temporary injunctive relief do not apply.

Defendants also assert that the Court should not resolve this matter because the Franklin Circuit has enjoined enforcement or enjoined the applicability of the New Legislation. Relating to this, the parties have presented arguments as to standing, ripeness and whether there was lack of controversy in Franklin Circuit where, purportedly, the party seeking the injunction is also the person that would be enjoined. But those arguments turn solely on the case in Franklin Circuit. The matter that is or was before the Franklin Circuit is different from the controversies presented here. And this Court does not agree that it should prevent final resolution on the merits in this case. Again, the Court agrees with the position espoused by *ex rel.* Attorney General Cameron that there is no basis for displacing the claims and controversies here.⁴³ “All courts shall be open, and every person for an injury done him . . . shall have remedy by due course of law, and right and justice administered without . . . denial or delay.”⁴⁴

As this Court sees it, Defendants’ arguments concerning the Franklin Circuit are more closely related to comity than jurisdiction or ripeness. Under the rules of comity, where two identical actions are brought in separate courts that could result in conflicting judgments with “calamitous results,” the court with the latter suit is counseled to defer.⁴⁵ However, comity only applies where all the parties are identical, and the cause of action in the first suit is identical with that in the second suit.⁴⁶ Here, the parties are not identical. Second, the cause of action differs as to the nature of the controversy. Third, there is evidence presented in this case that has not been presented in the other case, or the evidence otherwise differs. Moreover, there are already different decisions in at least two other circuits involving questions relating somewhat to that

⁴³ See Com. *ex rel.* Attorney General Daniel Cameron’s Resp., p. 13, quoting *Baze v. Commonwealth*, 276 S.W.3d 761, 767 (Ky. 2008), *Bell v. Cabinet for Health & Family Servs., Dep’t for Cmty. Based Servs.*, 423 S.W.3d 742, 751 (Ky. 2014).

⁴⁴ KY. CONST. § 14.

⁴⁵ *Delaney v. Alcorn*, 301 Ky. 802, 805-806 (Ky. 1946).

⁴⁶ *Riddle v. Howard*, 357 S.W.2d 705, 708 (Ky. 1962).

presented here. It is not uncommon for decisions among circuits to differ, especially on questions of first impression. And here, the parties are ploughing new ground.

Moreover, there are already conflicting rulings in Franklin and Scott Counties. Ultimately, the conflicting circuit decisions will be resolved on appeal—something that can be expedited as the history in this case demonstrates. Delaying decision here would deprive the litigants in this case from presenting their arguments on the facts and law presented here. Defendants contend that this can be remedied by allowing Plaintiff to file an *amicus* brief with the appellate tribunal in those other cases. But that is not equivalent to having one's own case heard. Nor does that allow for the presentation of evidence by the Plaintiff here.

B. Impact of Governor's Emergency Decrees

Plaintiff presented evidence of the injury it is suffering. Plaintiff, along with Intervening Plaintiff, also presented evidence that there is no scientific basis for many of the Governor's orders at issue. Based upon the data presented, they argue that the measures imposed in Kentucky have had no appreciable effect when compared to other states.

Richard Hayhoe, owner of Beans Café & Bakery, testified⁴⁷ that as a result of the capacity restrictions ordered by the Governor, he lost two-thirds of his restaurant's seating capacity. According to Hayhoe, the mandates have put his business in a precarious financial condition. Additionally, the Northern Kentucky Independent Health District cited Plaintiff for violating the Governor's mask mandate, for which Hayhoe was later criminally charged. Hayhoe testified that he was not afforded any opportunity to defend against the allegations. He said that, had he been able to, he would have explained that the person not wearing a mask had a health exemption.

⁴⁷ V.R. 05/17/2021, *circa* 10:31:30 a.m.

After passage of the New Legislation, Hayhoe’s business opted to develop a compliance plan based upon CDC guidance in lieu of the Governor’s mandates. The former, according to Hayhoe, are less restrictive. Hayhoe testified that he fears enforcement actions may still be brought against him even though as yet, that has not occurred following the passage of the Acts.

1. Analysis of Effectiveness of Various Mandates on Covid-19

Dr. Mary (“Molly”) Rutherford testified⁴⁸ as an expert in medicine in public health. Although Defendants objected to her qualifications, the Court found her education, background and experience sufficient. Dr. Rutherford obtained her master’s degree in public health at John Hopkins University, with a focus on epidemiology. She worked for Dr. Fauci for a total of nine years, the first six at National Institute of Allergy and Infectious Diseases, and the latter three at the National Institute of Health. She co-authored an international, peer reviewed article titled, “*Multi-treatment of Early Ambulatory High Risk SARS/COV-2 Infection.*”⁴⁹ She testified that she has treated nearly 100 patients for Covid-19 in her family practice. Dr. Rutherford is board certified in addiction medicine, and is the past Chair and a current board member of the American Academy of Family Physicians.

Dr. Rutherford pointed to several published articles during her testimony. One analyzed the effect that government mandates have had on the infection rates, hospitalizations and deaths from Covid-19 by comparing data from countries that imposed strict lockdowns against those that did nothing.⁵⁰ Among its conclusions, the study found that “government actions such as border closures, full lockdowns and a high rate of COVID-19 testing, were not associated with

⁴⁸ V.R. 05/17/2021, circa 10:46:30.

⁴⁹ Plaintiff’s Exh. 16.

⁵⁰ Plaintiff’s Exh. 17; Rabail Chaundhry, George Dranitsaris, *et al.*, *A country level analysis measuring the impact of government actions, country preparedness and socioeconomic factors on Covid-19 mortality and related health outcomes*, *EClinicalMedicine* 25 (2020) 100464 (21 Jul. 2020).

statistically significant reductions in the number of critical cases or overall mortality.”⁵¹

Similarly, a later study likewise found that the “[s]tringency of measures settled to fight pandemic, including lockdown, did not appear to be linked with the death rate.”⁵²

Another study opined that, even if cases are reduced in the short-term, interventions actually lead to more deaths overall.⁵³ According to the researchers’ findings, and Dr. Rutherford, the focus should have been only on those determined to be high risk, such as those over 70 years of age. Plaintiff also presented an article that is still in manuscript form that, in effect, challenges claims that government interventions saved any lives.⁵⁴ This study concludes that the “United Kingdom’s lockdown was both superfluous and ineffective,” and that proponents of government interventions employ “circular logic.”⁵⁵

Dr. Rutherford stated that, at first, she trusted Dr. Fauci and the CDC even though they were pushing governments to impose measures, such as social distancing, that were not based upon known science. However, Dr. Rutherford testified that in the following months, as a result of their actions, she no longer trusts what they say. It isn’t just that the government lockdowns did not help. Rather, she opined, the government’s actions have inflicted more harm and death. She testified that there has been an increase in overdose deaths and pointed to specific cases where she contends overdose deaths occurred as a direct consequence of the closure of facilities.

Finally, Dr. Rutherford also testified concerning Covid-19 data comparisons from various states, using it to illustrate the lack of difference between states that imposed harsh lockdowns

⁵¹ *Id.*, p. 5.

⁵² Plaintiff’s Exh. 20: Quentin De Laroche Lambert, Andy Marc, *et al.*, *Covid-19 Mortality: A Matter of Vulnerability Among Nations Facing Limited Margins of Adaptation*, *Front. Public Health* 8:604339 (19 Nov. 2020).

⁵³ Plaintiff’s Exh. 18: Ken Rice, Ben Wynne, *et al.*, *Effect of school closures on mortality from coronavirus disease 2019: old and new predictions*, *BMJ* 2020; 371:m3588 (7 Oct. 2020).

⁵⁴ Plaintiff’s Exh. 21: Stefan Homburg and Christof Kuhbandner, *Comment on Flaxman et al.*, Leibniz University Hannover and University of Regensburg (christof.kuhbandner@ur.de).

⁵⁵ *Id.*

from those that did not. In connection with this, Plaintiff presented a document identified as “Exhibit 26” containing a table of data comparisons. At the hearing, Defendants objected to admission of that document on grounds of improper foundation, and lack of identification of origin or sources. Because the testimony had occurred earlier in the day, and the witness had already been excused, the Court indicated that it would rule following a review of the testimony. Having done so, Defendant’s objection to Exhibit 26 is sustained.⁵⁶ However, the objection applied only to Exhibit 26, not her testimony, or the specific points of data contained therein on which she expressed knowledge.

2. Validity of Social Distancing and Mask Mandates on Covid-19

Stephen E. Petty, P.E., CIH, testified⁵⁷ as an expert and was accepted as such without objection. Mr. Petty has served as an expert witness in approximately 400 cases relating to toxic or infectious exposure, personal protective equipment (“PPE”), and as a warning expert. He also served as an epidemiology expert for the plaintiffs in the Monsanto “Roundup” cases, and for those in the Dupont C8 litigation. In connection with his service as an expert, he was deposed nearly 100 times and has provided court testimony in approximately 20 trials. Mr. Petty holds nine U.S. patents, has written a book comprising nearly 1,000 pages on forensics engineering, is a certified industrial hygienist, and a recognized expert with the Occupational Safety and Health Agency. Mr. Petty helped write the rules on risk assessment for the State of Ohio and has trained Ohio’s risk assessors.

Mr. Petty explained that the field of his expertise is “to anticipate and recognize and control things that could hurt people, everything from making them sick to killing them.”⁵⁸ He

⁵⁶ On cross-examination, Dr. Rutherford testified that she did not participate in compiling the document, could not provide source citations to identify the source(s) of the data within the document, could not state who performed the calculations contained in the document, and could not identify who chose which states to sample.

⁵⁷ V.R. 05/17/2021, *circa* 11:45:40.

⁵⁸ *Id.*

testified that, in this context, he has analyzed the use of masks and social distancing in connection with Covid-19. He testified that both the six-foot-distancing rule, and mask mandates, are wholly ineffective at reducing the spread of this virus. Masks are worthless, he explained, because they are not capable of filtering anything as small as Covid-19 aerosols. In addition, masks are not respirators and lack the limited protections that respirators can provide.

The N-95 respirator, which he states is in the bottom class of what may be classified as a respirator, is rated to filter 95% of all particles that are larger than .3 microns. However, a Covid-19 particle, which is only between .09 to .12 micron, is much smaller. Mr. Petty further explained that an N-95 will not even filter above .3 microns if it is not used in accordance with industry standards. Among the requirements, respirators must be properly fitted to seal along the face, and they also must be timely replaced. Mr. Petty stated that N-95 masks, which he said are often utilized as surgical masks, are “not intended to keep infectious disease from either the surgeon or from the patient infecting each other” but only to catch the “big droplets” from the surgeon’s mouth.”⁵⁹

According to Mr. Petty, masks have no standards, are not respirators, and do not even qualify as protective equipment. In contrast, respirators have standards, including rules that state respirators may not be worn by persons with facial hair, must be fitted to ensure a seal, and must be timely replaced—or, as in higher end respirators, the cartridges must be replaced to prevent saturation. In addition, standards for respirators also require users to obtain a medical clearance because the breathing restriction can impair lung function or cause other problems for persons having such limitations. Putting those persons in a respirator can harm their well-being.

⁵⁹ *Id.*

Concerning the effectiveness of respirators, Mr. Petty explained that it comes down to “big stuff” versus “small stuff.” Big stuff can be taken out by the body’s defenses, such as its mucus tissue, where droplets can be caught and eliminated. The small stuff, however—like aerosols—are more dangerous. Masks cannot filter the small stuff. According to Petty, because Covid-19 particles are comprised of aerosols, it is really, really, small stuff. And, as he pointed out, an N-95 is designed to filter larger particles. Even for particles as large as .3 micron, Mr. Petty testified that an N-95’s effectiveness is in direct proportion to its seal. In fact, he stated it becomes completely ineffective if 3% or more of the contact area with the face is not sealed.

Mr. Petty testified that masks leak, do not filter out the small stuff, cannot be sealed, are commonly worn by persons with facial hair, and may be contaminated due to repetitive use and the manner of use. He emphatically stated that mask wearing provides no benefit whatsoever, either to the wearer or others.

He explained that the big droplets fall to the ground right away, the smaller droplets will float longer, and aerosols will remain suspended for days or longer if the air is stirred. Mr. Petty testified that the duration of time that particles remain suspended can be determined using “Stoke’s Law.” Based on it, for particles the size of Covid-19 (.12 to .09 micron) to fall five feet would take between 5 and 58 days in still air. Thus, particles are suspended in the air even from previous days. And so, he asks, “If it takes days for the particles to fall, how in the world does a six-foot rule have any meaning?”⁶⁰

Mr. Petty acknowledged that both OSHA and CDC have recommended that people wear masks. However, he called this “at best dishonest.”⁶¹ As an example on this, he pointed to CDC guidance documents where, on page 1, it recommends wearing a mask; but then on page 6,

⁶⁰ *Id.*

⁶¹ *Id.*

admits that “masks, do not provide . . . a reliable level of protection from . . . smaller airborne particles.”⁶² According to Mr. Petty, those agencies have smart individuals who know better. Mr. Petty points out that, even before March 2020, it was known that Covid-19 particles are tiny aerosols. And on this, he states that he insisted that fact early on. He also points to a more recent letter by numerous medical researchers, physicians and experts with Ph.D.s, asking the CDC to address the implications of Covid-19 aerosols. During Dr. Stack’s subsequent testimony, he also acknowledged that Covid-19 is spread “by . . . airborne transmission that could be aerosols”⁶³

Finally, Mr. Petty pointed to another recent study by Ben Sheldon of Stanford University out of Palo Alto. According to that study, “both the medical and non-medical face masks are ineffective to block human-to-human transmission of viral and infectious diseases, such as SARS, CoV-2 and COVID-19.”⁶⁴ The Court finds the opinions expressed by Mr. Petty firmly established in logic. The inescapable conclusion from his testimony is that ordering masks to stop Covid-19 is like putting up chain-link fencing to keep out mosquitos. The six-foot-distancing requirements fare no better.

3. Data Comparisons: Kentucky and Freer States

Plaintiff and Intervening Plaintiff argue the Governor’s orders have been shown to be ineffectual and, therefore, cannot justify continued imposition on an emergency basis. They compare Kentucky’s data with the data from states that purportedly imposed no mandates, such as South Dakota, or states that imposed far less stringent mandates, such as Tennessee, Texas

⁶² *Id.*

⁶³ V.R. 05/17/2021, *circa* 02:05:45.

⁶⁴ V.R. 05/17/2021, *circa* 11:45:40.

and Florida. At the hearing, and in the Attorney General's Reply, the primary focus was on Florida. The Court can take judicial notice of the published data.⁶⁵

As to the greater freedoms allowed by the Governor in Florida, Dr. Steven Stack agreed that, "at varying times," Florida "had much less stringent requirements" than those imposed in Kentucky.⁶⁶ He further acknowledged that Florida "opened up earlier than us, yes, significantly."⁶⁷

The population of Florida is more than four times that of Kentucky, Florida's being 21,538,187 and Kentucky's 4,505,836.⁶⁸ In addition, Florida has a higher percentage of its population over age 65 than does Kentucky. In Florida, 20.9% of the people are over age 65, whereas in Kentucky 16.9% are over age 65.⁶⁹ Florida had 10,471 Covid-19 cases for every 100,000 people, and Kentucky had 10,197 per 100,000 people.⁷⁰ The CDC reports that, in Florida, for every 100,000 people, 167 died with Covid-19 and, in Kentucky, for every 100,000 people, 150 people died with Covid-19.⁷¹ That is a difference of a mere 0.017%, with Kentucky's number being slightly better.

However, Florida's population is older. In fact, an additional 4% of Florida's population are over age 65 compared to Kentucky. When that fact is considered, Florida's success and survival rate is better than Kentucky's. In Florida, deaths of persons with Covid-19 who were at

⁶⁵ See Attorney General's Post Hear'g Reply, pp. 9-12; see also KRE 201(c), and *Doe v. Golden & Walters, PLLC*, 173 S.W.3d 260, 264 (Ky. App. 2005), holding a court can take judicial notice of a fact that is generally known and "[c]apable of accurate and ready determination by resort to sources whose accuracy cannot reasonably be questioned."

⁶⁶ V.R. 05/17/2021, circa 03:58:38 p.m.

⁶⁷ *Id.*

⁶⁸ See U.S. Census Bureau data for 2020, available at: <https://www.census.gov/quickfacts/fact>; see also Att. Gen. Reply, p. 10 for 2019 Census Data.

⁶⁹ *Id.*

⁷⁰ See CDC Covid Data Tracker, available at: https://covid.cdc.gov/covid-data-tracker/#cases_casesper100k; see also, Att. Gen. Reply, p. 11.

⁷¹ *Id.*

age 65 and older represent 75.16% of the total persons who died of Covid-19 in that state.⁷² Compare that to Kentucky, where persons who died with Covid-19 over the age of 65 represent 87.75% of all Covid-19 deaths.⁷³ In any event, the data comparison demonstrate there to be no emergency justification for continuing Governor Beshear's orders.

4. Accuracy of CDC Case Counts

Dr. Stack testified as to the different methods by which cases are determined to be positive for Covid-19. He also provided information on the polymerase chain reaction ("PCR") test and that, by government order, the cycle rates used in that testing may not be disclosed. According to Dr. Stack, federal regulation prohibits labs from reporting to the public the number of cycles it took to yield a positive result during the test.⁷⁴ This is commonly referred to as "cycle threshold" or "Ct" values.⁷⁵ The Ct value is "the number of amplification cycles . . . at which the diagnostic test result of the real-time PCR changes from negative (not detectable) to positive (detectable)."⁷⁶ According to the guidance, the total number of cycles required to yield a positive result "generally ranges from about 15 to 45 cycles."⁷⁷ The guidance provided by Dr. Stack explains that, "[d]iagnostic laboratories should not include Ct values on laboratory reports because it could be out of compliance with laboratory regulations and they should not be used to inform patient management."⁷⁸

⁷² Compare CDC Covid Data Tracker, available at https://www.cdc.gov/nchs/nvss/vsrr/covid_weekly/index.htm#SexAndAge, with https://covid.cdc.gov/covid-data-tracker/#cases_casesper100k, and <https://www.census.gov/quickfacts/fact>.

⁷³ *Id.*

⁷⁴ V.R. 05/17/2021, at 03:50:00 p.m.; and 04:07:00.p.m

⁷⁵ See Defendants' Exh. A, at p. 31 of 34; *Ct Values: What They Are and How They Can be Used*; Vers. 1 APHL (Nov. 9, 2020).

⁷⁶ *Id.*

⁷⁷ *Id.*

⁷⁸ *Id.*

In contrast, however, the CDC has recently indicated that Ct values should be limited at, or less than, 28 cycles when cataloguing “breakthrough infections,” *i.e.*, infections occurring in persons that have been fully vaccinated for Covid-19. For those cases, the CDC states that “Clinical specimens for sequencing should have an RT-PCR Ct value ≤ 28 .”⁷⁹ This is, at the very least, a curious difference. The CDC accepts Cycle thresholds for ordinary PCR testing for sequencing even when amplified as high as 45 cycles. But for “breakthrough” cases, states it should be no higher than 28. This invites many questions, such as why Ct values in Covid tests should differ based upon whether or not the individual being tested has been vaccinated; and, why a federal government agency has ordered labs to “not include Ct values on laboratory reports . . . to inform patient management,” even though the CDC indicates that PCR Ct values should be ≤ 28 . These are important questions. Case counts have been the poster child for the need to deprive people of their liberty.

C. Constitutionality of the Acts

Defendants point out that, under the New Legislation, the General Assembly did not repeal the delegation it granted under Chapter 39A. Thus, Defendants argue, since the General Assembly has maintained its delegation to the Governor, thereby allowing him to make rules during an emergency, it cannot at the same time manage the Governor in how he goes about it. That, they insist, would be engaging in executive functions by the legislature. According to Defendants, because the New Legislation attempts to do so, it encroaches on the powers granted to the executive branch under the Constitution.

As to House Bill 1, Defendants’ challenge is on grounds that it attempts to delegate functions to the CDC. According to Defendants, House Bill 1 makes the CDC the interpretative

⁷⁹ See CDC, *COVID-19 vaccine breakthrough case investigation, Information for public health, clinical, and reference laboratories*, available at: <https://www.cdc.gov/vaccines/covid-19/downloads/Information-for-laboratories-COVID-vaccine-breakthrough-case-investigation.pdf> (last accessed, June 7, 2021).

or determinative body of what measures should be imposed upon businesses. Defendants complain that House Bill 1 does not specify which of the CDC's 100-plus guidance documents are not to be Kentucky law. Defendants further assert that CDC guidance is conflicting and difficult to navigate. Therefore, Defendants argue, because it makes CDC guidance the regulatory standard, House Bill 1 violates §§ 1 and 2 of Kentucky's Constitution for being impermissibly arbitrary, vague, and unintelligible.

Dr. Stack testified that he, in consult with others in the executive branch, reviews the guidance of the CDC and tailors the emergency orders that are imposed on Kentucky businesses.⁸⁰ According to Dr. Stack, CDC guidance would be too difficult for individual businesses to navigate on their own.⁸¹ However, as Plaintiff points out, the emergency orders issued by Defendants also contain references to CDC guidance. Initially Dr. Stack contended that it would be impossible to enforce a company's compliance plan if it was predicated on the CDC guidance.⁸² But, on cross-examination, he conceded that enforcement based upon CDC guidelines "should generally be doable."⁸³

It is true that the General Assembly may not legitimately delegate functions to the CDC, or make it the interpretive or determinative body for Kentucky law. But House Bill 1 does not delegate legislative function to the CDC. Rather, House Bill 1 uses CDC guidance as a limit on the rule-making authority delegated to the Governor. It caps the extent or scope of rulemaking that the Governor may impose by emergency decree. The Kentucky Supreme Court held that the General Assembly may delegate rulemaking under KRS Chapter 39A. House Bill 1 sets a

⁸⁰ V.R. 05/17/2021, *circa* 02:18:00 p.m.

⁸¹ *Id.*

⁸² *Id.*, *circa* 02:31:00 – 02:33:00 p.m.

⁸³ V.R. 05/17/2021, *circa* 03:02:00 p.m.

boundary on that delegation by using CDC guidance as the foul-line. For the reasons Defendants point out, it is not likely much of a limit. But it is a limit nonetheless.

Whereas House Bill 1 limits executive decrees by their scope, or extent of their reach, Senate Bills 1 and 2 limit their duration. Senate Bill 1 still allows the executive to restrict in-person meetings or social gatherings, and to impair attendance at places of worship, schools, businesses, and other organizations under Chapter 39A, but it limits any such orders to 30 days “unless an extension, modification, or termination is approved by the General Assembly.”⁸⁴ Senate Bill 2, § 22, contains a similar time limitation on administrative regulations. Defendants argue that this violates §§ 36 and 42 of the Kentucky Constitution which mandates that the General Assembly meet for only 30 days in odd years, and 60 days in even years. Further, Defendants point to § 80 of the Constitution, which provides that the Governor “may” call an extraordinary session. According to Defendants, because that provision gives the Governor discretion to call a special session, it implies that, should he decide not to, he has authority to decree whatever rules he deems necessary. This proposition, however, turns the Constitution’s strict separation of powers into a meaningless formula.

In support of their proposition, Defendants present historical accounts of Kentucky’s 1890-91 Constitutional Convention. Specifically, they quote delegates to show the Convention was called to constrain the General Assembly from meeting too often; that an ongoing legislature makes the people “subject at times to very great abuses;”⁸⁵ that without curbing the time during which the General Assembly may legislate, they “might go on for several months and expend the money of the people of Kentucky,”⁸⁶ and that the result was “too much legislation.”⁸⁷ None of

⁸⁴ 2021 Ky. Acts ch. 6 § 2.

⁸⁵ Defendants’ Resp. and Cross-motion, p. 36, quoting Delegate DeHaven, 1890 Debates, at 206.

⁸⁶ *Id.*, quoting Delegate Cox, 1890 Debates, 1126-27.

⁸⁷ *Id.*

this, however, proves that the people reined-in the legislature only to empower their governor to rule by mere decree in its stead. Indeed, that circumstance would be far worse than the first. The quotes presented by Defendants support the oft repeated quote that “*no one’s life, liberty, or property is safe while the legislature is in session.*”⁸⁸ But the complaint it expresses is not remedied by replacing legislation with executive rulemaking. As is so cleverly illustrated by the old Schoolhouse Rock cartoon, “*I’m Just a Bill,*” it’s not easy to pass a law. It’s not supposed to be. We have a bicameral legislature for a reason.

Defendants contend the Acts violate § 80 of the Constitution “[b]y forcing the Governor to call a special session to extend emergency orders,” thereby “effectively [rewriting §§ 36 and 42] to allow the General Assembly to meet for 30 legislative days during odd-numbered years and 60 legislature days in even numbered years, *unless an emergency exists.*”⁸⁹ The Court disagrees. The Acts do not provide any means for the General Assembly to reconvene itself by virtue of its own legislation. It still requires a call from the Governor, and that call still remains at his discretion. Section 80 of the Constitution provides that the Governor “may, on extraordinary occasions, convene the General Assembly . . . stating the subjects to be considered, and no other shall be considered.” The Acts are consistent with this provision. The following quote attributed to Delegate MacKoy perhaps best makes the point:

It is to be presumed, I think, when the Legislature is convened in special session, that it is so called in pursuance of some emergency of some public demand that is urgent, and that the Governor, knowing the wishes of the people and understanding fully the emergency, will call the Legislature in special session only when it is absolutely necessary that it shall be done.⁹⁰

⁸⁸ Author unknown.

⁸⁹ Defendants’ Resp. and Cross-motion, p. 37 (italics in original).

⁹⁰ *Id.*, quoting Delegate MacKoy, 1890 Debates, at 1049.

Before KRS Chapter 39A, if there was “some emergency” and the General Assembly was not then in normal session, the Governor had to call a special session and, as provided in § 80, present “the subjects to be considered” for legislation. Under the New Legislation, if there is “some emergency,” the Governor may declare an emergency and act on his own for up to 30 days. After that, the authority delegated expires unless the General Assembly shall approve an extension. This does not square with Defendants’ position that executive power is being usurped. As Delegate MacKoy remarked, a special session is “called in pursuance of some emergency . . . that is urgent.” If a purported emergency that would extend beyond 30 days is not sufficiently urgent to call a special session, then it is not sufficiently urgent to justify the imposition of indefinite and open-ended rulemaking by executive decree. As John Adams counseled, “*The only maxim of a free government ought to be to trust no man living with power to endanger the public liberty.*”⁹¹

Defendants also attack § 4 of Senate Bill 1 because it requires the Governor to identify with specificity the laws being suspended, and conditions the Governor’s emergency power to suspend laws upon the written approval of the Attorney General. According to Defendants, that is constitutionally offensive because it makes the action of the Governor depend upon a lesser constitutional officer. However, § 15 of the Constitution commands that, “No power to suspend laws shall be exercised unless by the General Assembly or its authority.” Clearly, if the Governor can suspend laws, he can only do so “by the General Assembly or its authority.” In *Acree*, the Kentucky Supreme Court held the General Assembly could delegate that authority. Now the General Assembly has, “by its authority,” limited that delegation by the conditions set out in Senate Bill 1.

⁹¹ John Adams, Bill of Rights Institute, <https://billofrightsinstitute.org/founders/john-adams>, last accessed May 29, 2021.

Defendants also assert that, if the Governor’s emergency orders are not legislative in nature, or do not involve legislative power, then he has the authority under the Constitution to act without regard to any delegation under KRS Chapter 39A. If the Governor’s emergency orders were not engaging in legislative power, that would certainly be true. Legislative power is defined in Black’s Law Dictionary as, “[t]he power to make laws and to alter them at discretion”⁹² Legislative function means “[t]he duty to determine legislative policy”; “the duty to form and determine future rights and duties.”⁹³ And the definition of legislate includes, “[t]o bring something into or out of existence by making laws; to attempt to control (something) by legislation”⁹⁴

Clearly, what has been ordered by the Governor’s emergency decrees constitute legislation. Dr. Stack’s testimony demonstrates that he and others engage in a process of collaboration and review of CDC guidelines and other documents, the purpose of which is to impose rules on persons and businesses in Kentucky, and that in formulating these rules they tailor them to apply uniformly across the Commonwealth.⁹⁵ This is formulating policy. He further testified that they have repeatedly amended and revised their orders, thus showing they deem to have the power to make laws and alter them at discretion. Indeed, he described the orders imposed as having a “breathtaking scope.”⁹⁶

It is obvious from even a cursory review that the orders issued over the past fifteen months “attempt to control” and seek “to form and determine future rights and duties” of Kentucky citizens. These included ordering the closure of all businesses, except those the Governor deemed essential. He ordered churches closed, prohibited social gatherings, including

⁹² BLACK’S LAW DICTIONARY, 7th ed., West Group, p. 911 (St. Paul MN: 1999) (defining “legislative power”).

⁹³ *Id.* (defining “legislative function”).

⁹⁴ *Id.*, at 910 (defining “legislate”).

⁹⁵ V.R. 05/17/2021, *circa* 02:18:00.

⁹⁶ *Id.*, at *circa* 03:02:00.

at weddings and funerals, prohibited travel, and through CHFS, even prohibited citizens from receiving scheduled surgeries and access to medical care. And then there is the order that everyone wear a mask. These are, undeniably, attempts to control, set policy, and determine rights and duties of the citizenry. Except in those instances where the federal courts have stepped in, Defendants assert authority to modify or re-impose these orders at their sole discretion. Consider, for example, the recent modification of the mask mandate. It orders persons who did not get vaccinated for Covid-19 to wear masks but lifts that requirement for others. That is setting policy and determining future rights and duties.

At the hearing, Defendants took exception to the Attorney General's characterization of the Governor's actions as a "lockdown," and argued that prohibiting persons from entering those restaurants is not the same as ordering that they be closed. But that doesn't minimize the impact on those who lost their businesses as a result, or those in nursing homes condemned to spend their final hours alone, deprived of the comfort from loved ones (or even any real contact with humanity), or those citizens who the Governor prohibited from celebrating their wedding day with more than ten persons, or those he forced to bury their dead alone, without the consoling presence of family and friends (and who likewise were deprived of paying their final respects), or those persons who were barred from entering church to worship Almighty God during Holy Week, and even Easter Sunday, or those persons who were denied access to health care, including cancer-screenings, or those denied entry into government buildings (which they pay for with their taxes) in order to obtain a necessary license, and who were forced to wait outside for hours in the sweltering heat, or rain, purportedly to keep them from getting sick.

What the people have endured over the past fifteen months—to borrow a phrase from United States District Judge Justin R. Walker—"is something this Court never expected to see

outside the pages of a dystopian novel.”⁹⁷ Yet, Defendants contend that the Governor’s rule by mere emergency decree must continue indefinitely, and independent of legislative limits. In effect, Defendants seek declaratory judgment that the Constitution provides this broad power so long as he utters the word, “emergency.” It does not. For this Court to accept Defendant’s position would not be honoring its oath to support the Constitution; it would be tantamount to a *coup d’état* against it.

To succeed on their claims that the New Legislation is unconstitutional, Defendants bear a heavy burden. Statutes enacted by the General Assembly enjoy a “strong presumption of constitutionality.”⁹⁸ This is especially true here, since Defendants contend that the Acts are unconstitutional on their face. “A facial challenge to a legislative Act is, of course, the most difficult challenge to mount successfully.”⁹⁹ In order to find legislation unconstitutional, “the violation of the Constitution must be clear, complete and unmistakable.”¹⁰⁰ Further, the party “must establish that no set of circumstances exists under which the Act would be valid.”¹⁰¹ For all of the foregoing reasons, this Court finds that Defendants have failed to meet their burden. And for the same reasons, Plaintiff’s Motion, and the arguments of the Attorney General, are well taken.

THEREFORE, JUDGMENT IS HEREBY ENTERED in favor of Plaintiff and **DECLARATORY RELIEF** is **GRANTED** in that the Court finds and declares that all actions taken by Defendants, Hon. Andrew Beshear, as Governor, Mr. Eric Friedlander, as acting Secretary of the Cabinet for Health and Family Services, and Dr. Steven Stack, M.D., as

⁹⁷ *On Fire Christian Center, Inc., v. Greg Fischer, et al.* 3:20-CV-264-JRW, p. 3 (U.S. Dist. Ct., W. Dist. Ky., Apr. 11, 2020).

⁹⁸ *Wynn v. Ibold, Inc.*, 969 S.W.2d 695, 696 (Ky. 1998).

⁹⁹ *Williams v. Commonwealth*, 213 S.W.3d 671, 681 (Ky. 2006), quoting, *Rust v. Sullivan*, 500 U.S. 173, 183 (1991).

¹⁰⁰ *Williams*, 213 S.W.3d, at 681, quoting *Kentucky Industrial Utility Customers, Inc. v. Kentucky Utilities Company*, 983 S.W.2d 493, 499 (Ky.1998).

¹⁰¹ *Williams*, 213 S.W.3d, at 681, quoting *Rust*, 500 U.S., at 183.

Commissioner for the Kentucky Department of Public Health, and all emergency orders imposed by said Defendants, or that are being continued by said Defendants, are unconstitutional, void and without any legal effect, to the extent that the same are in conflict with, or are otherwise contrary to, House Bill 1, Senate Bill 1, Senate Bill 2, and House Joint Resolution 77, as passed in the 2021 session of the General Assembly.

IT IS FURTHER HEREBY ORDERED that Plaintiff's Motion for Permanent Injunction is **GRANTED** and that, effective June 10, 2021, at 5:00 p.m., Defendants, Hon. Andrew Beshear, as Governor, Mr. Eric Friedlander, as acting Secretary of the Cabinet for Health and Family Services, and Dr. Steven Stack, M.D., as commissioner for the Kentucky Department of Public Health, are enjoined from enforcing Plaintiff to comply with any emergency orders imposed by said Defendants, or that are being continued by said Defendants, that are in conflict with, or are otherwise contrary to, House Bill 1, Senate Bill 1, Senate Bill 2, and House Joint Resolution 77, as passed in the 2021 session of the General Assembly.

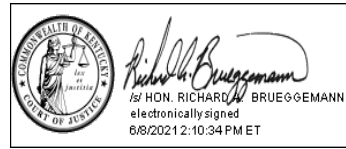
IT IS FURTHER HEREBY ORDERED that Plaintiff's Motion for Class Certification is **DENIED**, in that the result of the Declaratory Judgment has the same effect.

IT IS FURTHER HEREBY ORDERED that Defendants' Cross-Motion for Declaratory Judgment that the General Assembly violated the Constitution in passing House Bill 1, Senate Bill 1, Senate Bill 2, and House Joint Resolution 77, is **DENIED**.

There being no just cause for delay in the entry of this Judgement, this Judgment is final and appealable.

The Clerk shall serve notice of entry hereof in accordance with CR 77.

IT IS SO ORDERED.



**JUDGE RICHARD A. BRUEGGEMANN
BOONE CIRCUIT COURT**

CC: ALL COUNSEL AND PARTIES OF RECORD.

3D6BAC2F-53A1-4402-BB90-973E51C973BD : 000030 of 000030

OO : 000030 of 000030

PRODUKTIE 21

The WHO's Reckless Disregard for Truth

BY DAVID BELL JULY 29, 2022 PUBLIC HEALTH 6 MINUTE READ

SHARE | PRINT | EMAIL



Public health relies on trust. Advertising relies on twisting the truth, even deceiving people, to persuade them to buy a product they may not need. Trust is maintained by telling the truth, giving others accurate information and sound advice. If inclined, you can change direction, trading on trust that you have built in order to deceive more effectively.

This works until the audience starts to understand that you have started lying. It is the worst sort of deceit. The World Health Organization (WHO) has adopted this latter course, using its former status to deceive the public in order to increase global uptake of Covid-19 vaccines.

Last week the WHO's media office issued a [press release](#) summarizing an update to its global Covid-19 [vaccination strategy](#). This strategy requires the highest annual budget of any single program in the WHO's history; \$10.1 billion was [budgeted](#) for 2021, about three times the previous total annual [expenditure](#) of the entire organization.

With \$3 billion accrued, the WHO is seeking the shortfall and wants to expand this through 2022. This bill is mainly footed by taxpayers in the ailing economies of the West. Covid-19 remains a minor health burden in the countries on the receiving end, while malnutrition and other infectious diseases are rising. The strategy is therefore important to both sides, as it will harm both.

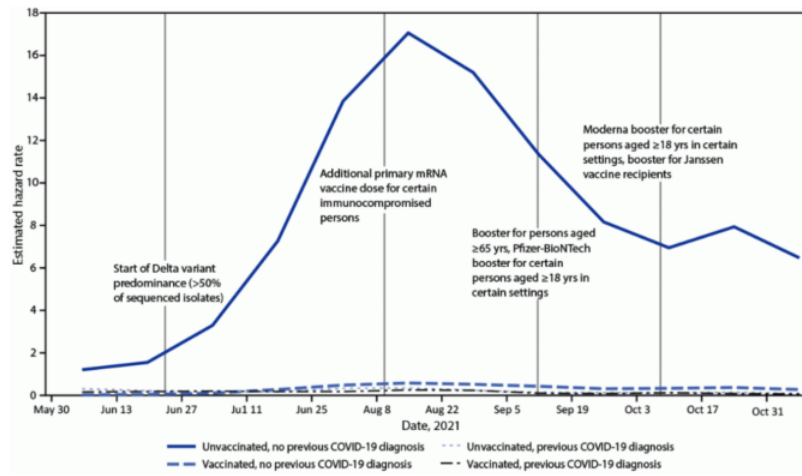
The Fallacy of Need

The strategy outlined in the [press release](#) calls for vaccination of 70% of people in low and middle income countries, "to achieve durable, broadly protective immunity." This only makes sense if the populations on the receiving end are not already immune. To claim this, WHO must ignore its own work showing high rates of post-infection immunity in low-income countries.

A [study](#) by WHO personnel estimated a large majority of Africans had antibodies against Covid-19 by September 2021, which means actual immunity, mediated mainly by T-cells, will be much higher. This study was performed before the highly transmissible Omicron variant added to this number. [India data](#) is similar.

Post-infection ("natural") immunity produces clinical protection to Covid-19 at least as broad and more [sustained](#) than that produced through vaccination ([Ref](#), [Ref](#), [Ref](#), [Ref](#), [Ref](#)). The WHO is also aware that vaccination added to natural immunity adds minimal clinical benefit (well demonstrated in the [CDC chart](#) below). When the WHO states that only "28% of old people and 37% of health workers" in low-income countries have received Covid-19 vaccines, and fewer in the general population, they know that nearly all the unvaccinated also have effective immunity. The WHO wishes to spend this unprecedented budget on mass vaccination of an immune population.

FIGURE. Incident laboratory-confirmed COVID-19-associated hospitalizations among immunologic cohorts defined by vaccination and previous diagnosis histories — California, May 30–November 13, 2021*.[†]



* The SARS-CoV-2 Delta variant exceeded 50% of sequences in U.S. Department of Health and Human Services Region 9 (containing California) during the week of June 26. <https://covid.cdc.gov/covid-data-tracker/#variant-proportions>

[†] Estimated hazard rate is laboratory-confirmed COVID-19-associated hospitalizations per 100,000 person-days visualized at midpoint of each reporting interval.

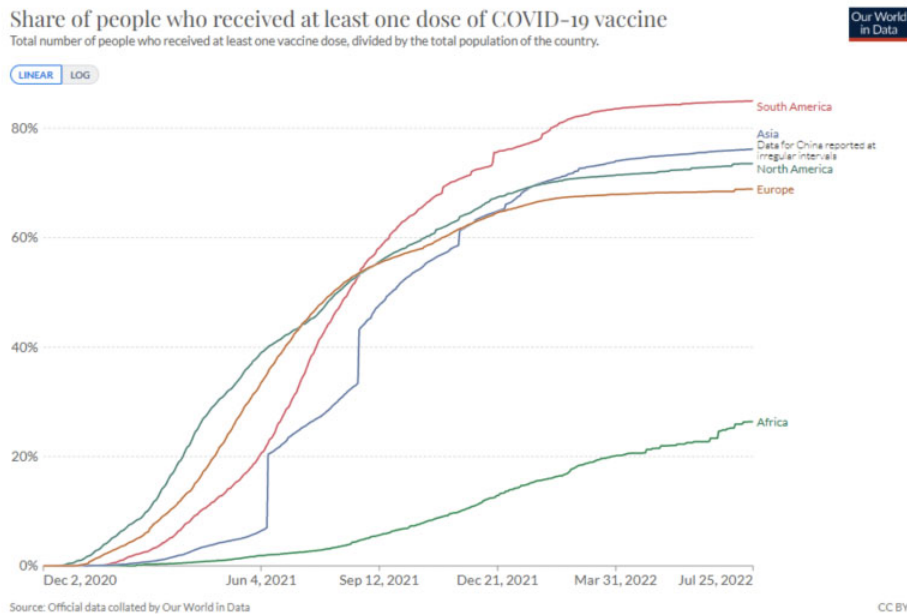
Source: <https://www.cdc.gov/mmwr/volumes/71/wr/mm7104e1.htm>

False Claims on Impact

The [press release](#) claims that “In the first year of rollouts, Covid-19 vaccines are estimated to have saved 19.8 million lives.” This number makes no sense. The WHO previously published that only [14.9 million](#) excess deaths occurred across 2 years of the Covid-19 outbreak of 2020–2021. These include deaths due to SARS-CoV-2 infection, and those due to lockdowns and other response measures. Covid-19 was endemic across all continents by the end of 2020, in the absence of vaccination. Ignoring its own data, WHO derives its ‘19.8 million saved’ from [flawed](#) Imperial College London modeling.

Lockdowns killed hundreds of thousands, probably millions of people. UNICEF estimated nearly a quarter million excess child deaths due to lockdown (not Covid-19) across just [6 South Asian countries](#) in 2020 alone. To start to understand how many people Covid-19 really killed pre-vaccination, these excess non-Covid-19 deaths within the 14.9 million must be extrapolated to Africa, and include rising deaths from diseases such as [malaria](#), [tuberculosis](#), and [malnutrition](#).

Many pre-vaccination deaths were therefore likely related to the response, not the disease. The WHO wants us to believe that the vaccine saved several-fold more lives in 2021 than could possibly have died from Covid-19 when immunity was at its lowest throughout 2020. We must believe this despite most Asian and African countries only establishing significant vaccination rates in mid to late 2021, by which time [most people](#) had [already](#) been infected.



People receiving any vaccine dose.

Source: <https://ourworldindata.org/explorers/coronavirus-data-explorer>

Stating implausible modeling outputs as fact when they are contradicted by the WHO's own data is not a nuance. It constitutes deliberate misrepresentation of the program's potential impact. It is an attempt to mislead public health authorities, the public, and the media. The WHO should explain why.

A baseless strategy

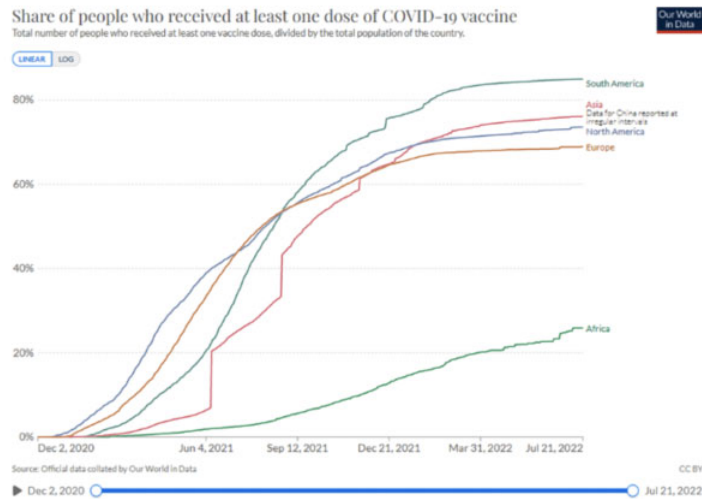
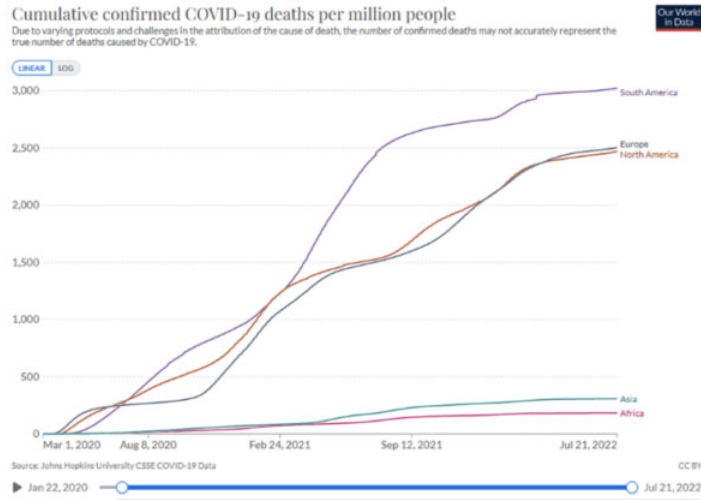
"Vaccinating all those most at risk is the single best way to save lives, protect health systems and keep societies and economies open." The WHO media department states this as the basis for mass vaccination, whilst admitting that Covid-19 vaccines "have not substantially reduced transmission."

Indeed, countries with the current highest transmission rates, such as New Zealand, are among the most vaccinated. If a vaccine does not reduce transmission, and severe Covid-19 is concentrated in a small segment of the sick and elderly (it is), then mass vaccination of already-immune people cannot have an influence on 'keeping society open.' This is achieved by not closing it.

In its strategy update, WHO justifies its entire mass vaccination program through its ability "...to achieve durable, broadly protective immunity, and reduce transmission." By its own data, lasting durable protective immunity is already present, and the product it is pushing does not stop transmission. This resembles false advertising of a commodity that an advertising agency is paid to promote, rather than a reasoned explanation of a public health strategy.

Honesty Matters in Public Health

Significant WHO funders will be enriched by this program through the procurement of billions of vaccine doses, so not everyone loses. The target 'under-vaccinated' populations in Africa and Asia record less, not more, deaths from Covid-19. They are younger, less obese, and therefore less susceptible. They die of other diseases, and currently face collapsing food supplies and growing poverty due in large part to the lockdown policies that the WHO continues to support. The WHO needs to explain why health equity has become less important than achieving equal injection rates of the pharmaceuticals that major WHO sponsors have invested in.



Source: <https://ourworldindata.org/explorers/coronavirus-data-explorer>

The data in the WHO's possession shows this unprecedentedly expensive program can have little positive impact on health. By diverting attention and resources from areas of true health need, the WHO will further increase mortality. Doing this by deceiving the public and ignoring its own data is a poor strategy.

It is time the WHO explained what it is doing. Whilst seeking greater powers to declare and manage future disease outbreaks, it is demonstrating that the organization is unfit for that purpose. This unfitness will not be remedied by more funding or expertise, because it stems from the WHO's abandonment of its core constituency and its reckless disregard for truth.

Author



David Bell

David Bell, senior scholar of Brownstone Institute, is a public health physician based in the United States. After working in internal medicine and public health in Australia and the UK, he worked in the World Health Organization (WHO), as Programme Head for malaria and febrile diseases at the Foundation for Innovative New Diagnostics (FIND) in Geneva, and as Director of Global Health Technologies at Intellectual Ventures Global Good Fund in Bellevue, USA. He consults in biotech and global health. MBBS, MTH, PhD, FAFPHM, FRCP

PRODUKTIE 22

Wob-documenten: Mondkapjesplicht was niet wetenschappelijk en had geen effect op gedragsverandering

Regering wilde een mondkapjesplicht om afstandsmaatregelen te handhaven. OMT en RIVM konden geen onderbouwing geven. Ook een gedragsexperiment van Femke Halsema gaf niet het gewenste resultaat.



Daniël van der Tuin
Apr 17

38

10



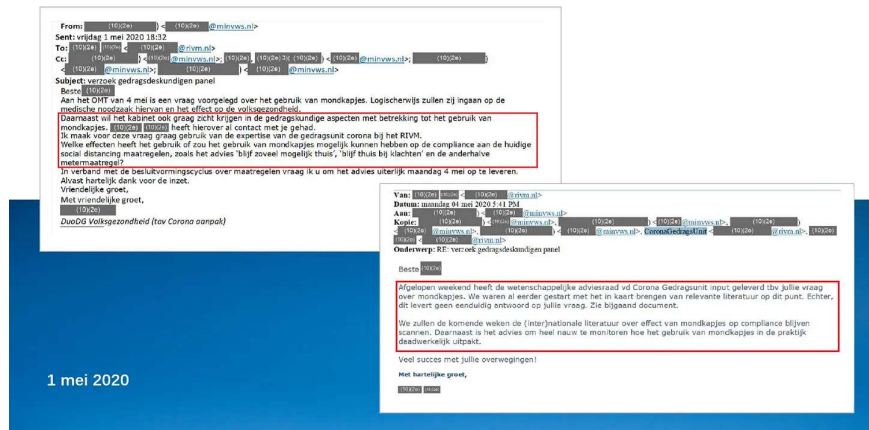
Het kabinet heeft het OMT aan het begin van de epidemie gevraagd om het gebruik van mondkapjes te onderbouwen, met als bedoeling om de 1,5 meter maatregel te handhaven. Het RIVM kon de afstandsmaatregel noch het effect van mondkapjes wetenschappelijk onderbouwen. Ook twee mondkapjesexperimenten leverden niet het gewenste resultaat. Toch werd vanaf 1 oktober 2020 een landelijke draagplicht ingevoerd. Dit beeld komt naar voren uit onderzoek in wob-documenten.

Het onderzoek is van [Aukema](#), [Van der Vegt](#), [Van den Bos](#) en [Van der Tuin](#).

Uit onderzoek in de wob-documenten (zie [Twitter post](#)) blijkt dat al in het vroege begin van de epidemie bekend was dat mondkapjes geen nut hebben ten aanzien van virusbestrijding: ze voorkomen geen virusoverdracht en ze hebben ook geen effect op het handhaven van de afstandsmaatregel. Ook voor de afstandsmaatregel is er geen wetenschappelijke onderbouwing. Officiële overheidsdocumenten laten zien dat deze kennis sinds het begin van de epidemie bij de overheid aanwezig was. Ook een groots mondkapjesexperiment in Amsterdam met behulp van politiebeelden leidde niet tot de gewenste onderbouwing.

1 mei 2020: Kabinet wil onderzoek naar mondkapjes

Op 1 mei 2020 wordt het OMT door het kabinet gevraagd om advies te geven over de medische noodzaak van mondkapjes en de invloed op het gedrag. De vraag van het kabinet komt terecht bij de Corona Gedragsunit van het RIVM. Hierin zitten deskundigen op het gebied van gedragsverandering en psychologie. De deskundigengroep buigt zich vervolgens over het effect van mondkapjes op het naleven van afstandsmaatregelen, zoals de 1,5 meter maatregel en thuisblijfgedrag.



Volgens OMT hebben mondkapjes misschien invloed op gedrag

Bij het RIVM gaat dan correspondentie rond waarin de vraag van het kabinet nog eens duidelijk staat geformuleerd: "hebben mondkapjes effect op het volhouden van de maatregelen?". Het kabinet wil dus weten of mondkapjes helpen om afstandsmaatregelen langer vol te houden. Het OMT neemt het standpunt in dat mondkapjes mogelijk een gedragsfunctie kunnen hebben. Maar het heeft ook zorgen dat mondkapjes onvoorzichtig gedrag in de hand kunnen werken, omdat mensen zich ten onrechte veilig wanen; mondkapjes hebben dus nadrukkelijk geen medische functie.

Gedragsunit Corona: mondkapjes leiden tot risicovol gedrag

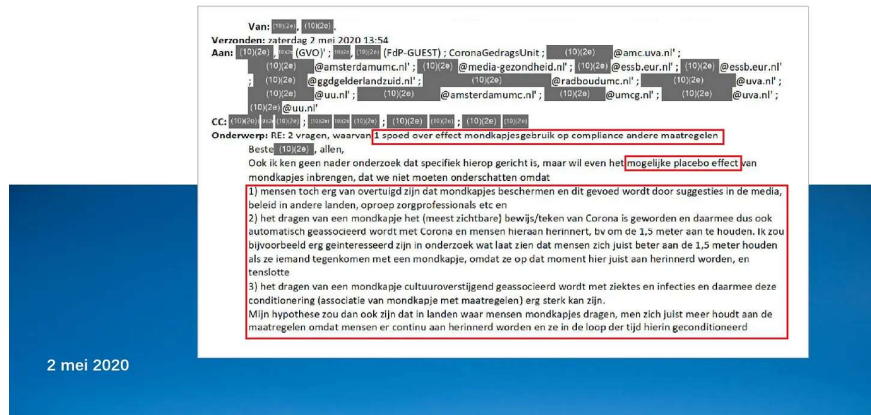
Binnen de Gedragsunit Corona buigen gedragsdeskundigen en psychologen zich vervolgens over de vraag van het kabinet. Een deskundige van de Universiteit van Amsterdam is van mening dat mondkapjes zullen leiden tot een toename van risicovol gedrag, omdat mensen zich ten onrechte beschermd voelen. De deskundige schrijft: "Ik vermoed dat mensen die zich beschermd wanen door een mondkapje, meer risico gaan nemen en minder aan social distancing doen."

Gedragsdeskundigen: mondkapjes bewijzen dat Corona bestaat

Een andere gedragsdeskundige reageert: "Ik ken geen onderzoek naar het effect van mondkapjes op afstandsmaatregelen. Wel zijn veel mensen er van overtuigd dat mondkapjes beschermen. Dit wordt gevoed door suggesties in de media, beleid in andere landen en de oproep aan zorgprofessionals om mondkapjes te dragen." De deskundige stelt ook vast dat mondkapjes ertoe bijdragen dat mensen herinnerd worden aan het bestaan van Corona: "Mondkapjes zijn het meest zichtbare bewijs van Corona geworden".

Experts: dankzij mondkapjes denken mensen continu aan Corona

Een andere deskundige zegt dat mondkapjes over de hele wereld worden geassocieerd met ziektes en infecties. Volgens de gedragsexpert kunnen ze daarom erg goed werken bij het conditioneren van de Nederlandse bevolking. De gedragsdeskundige vervolgt: "Door mondkapjes in te zetten worden mensen continu herinnerd aan Corona. Ze helpen om mensen te conditioneren om continu aan Corona te denken."



Deskundigen: met mondkapjes kunnen mensen slecht ademhalen

Een gedragsdeskundige van het Amsterdam Universitair Medisch Centrum ziet veel interessante bijdragen langs komen en vat het als volgt samen: “Mijn lezing is dat de meeste betrokkenen het eens zijn over de hoofdzaken: mondkapjes moeten door de overheid worden aanbevolen, want dan kan ze de discussie naar zich toetrekken.” Deze gedragsdeskundige heeft echter ook in vakliteratuur gelezen dat mondkapjes ervoor zorgen dat mensen slecht kunnen ademhalen.

Wetenschappelijke adviesraad: geen eenduidig antwoord

Na uitvoerig beraad, geeft de wetenschappelijke adviesraad van de Corona Gedragsunit op 4 mei 2020 antwoord op de vraag van het kabinet. De adviesraad stelt dat er vanuit de literatuur geen eenduidig antwoord is. Bij gebrek aan bestaande studies, stelt de raad voor om in praktijk te gaan onderzoeken hoe het gebruik van mondkapjes uitpakt. Dit legt de basis voor twee experimenten in de zomer van 2020, naar het effect van mondkapjes op het gedrag van Nederlandse burgers.

Eerste mondkapjesexperiment in Amsterdam

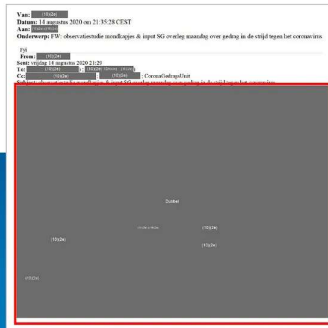
Enkele weken later wordt in Amsterdam een onderzoek uitgevoerd naar het vrijwillig gebruik van mondkapjes. Uit wob-documenten blijkt dat hiervoor zogenaamde CCTV beelden (closed-circuit television) zijn gebruikt, waarmee mensen nauwlettend zijn gevolgd en hun gedrag tot in detail door ambtenaren is geanalyseerd. Normaal gesproken mogen dit soort beelden alleen gebruikt worden voor onderzoek naar diefstal en criminaliteit in de publieke ruimte.

Voor dit experiment werden CCTV beelden gebruikt

Het Openbaar Ministerie geeft voor het mondkapjesexperiment toestemming om de politiebeelden te gebruiken voor covid-19 gerelateerde conflicten in de publieke ruimte. Uit de wob-documenten ontstaat echter het beeld dat het gebruik van CCTV beelden illegaal was: het experiment ging van start voordat er formeel toestemming was gegeven. Binnen het ministerie van Volksgezondheid gaan er vragen rond over het experiment: de zorg is of de Amsterdamse testpersonen wel wisten dat hun gedrag via camerabeelden werd geanalyseerd.



16 augustus 2020

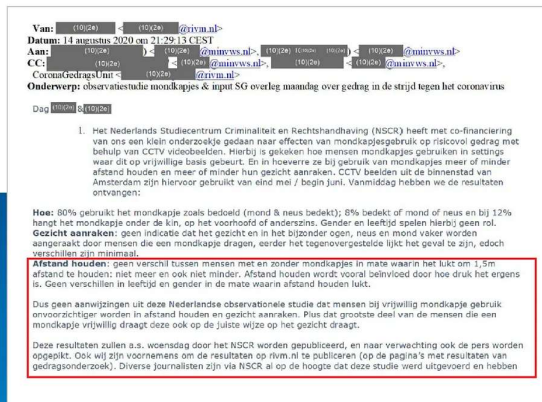


De NSCR analyseerde gedrag van burgers met politiebeelden

Het gedragsexperiment in Amsterdam wordt gefinancierd en geanalyseerd door het Nederlands Studiecentrum Criminaliteit en Rechtshandhaving (NSCR). Doorgaans doet het NSCR wetenschappelijk onderzoek naar criminaliteit en rechtshandhaving op het snijvlak van theorie, beleid en praktijk. Voor deze gelegenheid heeft het studiecentrum echter camerabeelden geobserveerd van mondkapjesdragers en hun gedrag geanalyseerd.

Conclusie experiment: mondkapjes hebben geen enkel effect

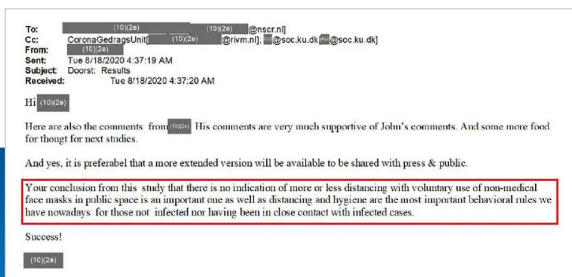
De onderzoekers van het NSCR komen tot een aantal inzichten na het bekijken van de camerabeelden. Allereerst zien zij geen verschil in het gedrag van mensen mét en zonder mondkapje; beide groepen houden in dezelfde mate afstand van elkaar. De onderzoekers observeren ook dat afstand houden niets te maken heeft met het dragen van een mondkapje maar wordt bepaald door hoe druk het is. Kortom: mondkapjes hebben geen effect op het houden van afstand. Daarmee is de vraag van het kabinet feitelijk met eigen onderzoek beantwoord.



14 augustus 2020

Het Rijk onderzoekt of burgers hun ogen, neus of mond aanraakten

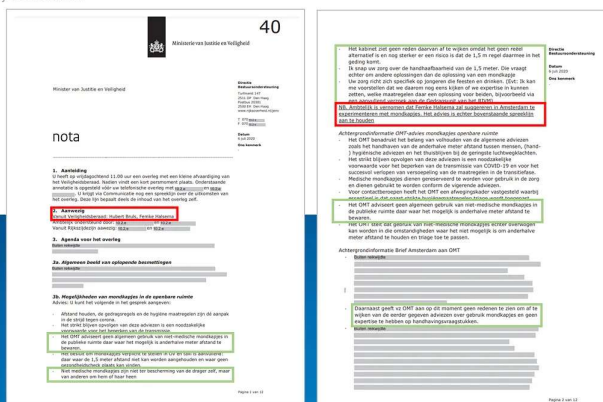
Met behulp van de CCTV camerabeelden observeren de gedragsonderzoekers dat 80 procent van de mensen een mondkapje gebruikt zoals voorgeschreven (mond en neus bedekt). Zij ontdekken ook dat van de testpersonen 8 procent óf de mond óf de neus bedekt en bij 12 procent hangt het mondkapje onder de kin, op het voorhoofd of anderszins. Het NSCR stelt vast dat er geen indicatie is dat het gezicht en in het bijzonder de ogen, neus en mond vaker of minder vaak worden aangeraakt door mensen die een mondkapje dragen.



18 augustus 2020

Augustus 2020: tweede experiment in Amsterdam en Rotterdam

De uitkomsten van het onderzoek van het studiecentrum zijn dus helder. In een e-mail van 14 augustus 2020 aan de Universiteit Kopenhagen wordt dit nog eens door de gedragsonderzoekers onderschreven. Hierin staat dat het experiment geen indicatie geeft dat er meer afstand wordt gehouden bij het gebruik van niet-medische mondkapjes in de publieke ruimte. In dezelfde e-mail schrijft het NSCR dat zij alweer bezig is met een nieuw gedragsexperiment in Rotterdam en Amsterdam, dat wordt uitgevoerd tussen 5 tot 31 augustus 2020.



6 juli 2020

Minister De Jonge (VWS): Veiligheidsregio's willen experimenteren

Hoewel het onderzoeksresultaat volstrekt helder is, hebben de Veiligheidsregio's Rotterdam en Amsterdam toch ambities om verder te experimenteren met een mondkapjesplicht. Met name burgemeester Halsema van Amsterdam blijkt hiervan een groot voorstander te zijn. De wob-documenten tonen dat de burgemeester het OMT en de spreeklijnen van het Rijk flink in de wielen rijdt met haar drang tot experimenteren. Via Halsema komt een groter gedragsexperiment tot stand. De motivatie hiervoor is volgens minister De Jonge (VWS) "dat de veiligheidsregio's kampen met uitdagingen om de naleving van covid-maatregelen te handhaven".

Kabinet was eerste opdrachtgever, niet de veiligheidsregio's

In antwoord op Kamervragen laat De Jonge weten dat Amsterdam en Rotterdam vanaf 5 augustus 2020 gaan experimenteren met mondkapjes. Volgens De Jonge is het kabinet van mening dat het geoorloofd is om noodverordeningen in te zetten om dit tijdelijk mogelijk te maken. De Jonge zegt ook dat deze lokale experimenten een initiatief zijn van de voorzitters van veiligheidsregio's. Echter, het team dat onderzoek doet in de wob-documenten observeert dat op 1 mei 2020 was gebleken dat het kabinet de eerste opdrachtgever was van de inzet van mondkapjes.



23 augustus 2020

Veel boetes tijdens het mondkapjesexperiment

In augustus 2020 staat feitelijk al vast dat mondkapjes geen enkel effect hebben op het houden van afstand, laat staan dat ze een medische functie hebben. Toch hebben de veiligheidsregio's het dragen van een mondkapje opgenomen in noodverordeningen en op overtreding staan hoge boetes. Alleen al op 23 augustus worden door Amsterdamse boa's 148 boetes van 95 euro uitgedeeld. Op dezelfde dag wordt ook een burger door de politie aangehouden die het 'mondkapjesgebied' in wilde zonder mondkapje.¹

RIVM: 1,5 meter maatregel is niet wetenschappelijk onderbouwd

De mondkapjesexperimenten hadden als doel om te onderzoeken of mondkapjes helpen bij het handhaven van de 1,5 meter maatregel. Maar op 18 augustus 2020 stelt het RIVM vast dat de wetenschappelijke onderbouwing voor de 1,5 meter maatregel 'bescheiden' is. Volgens het RIVM kan de afstandsmaatregel daarom beter worden onderbouwd met een advies van de WHO en het beleid in omliggende landen. Dit standpunt werd al eerder ingenomen in een tussenevaluatie van het RIVM op 3 augustus 2020.

-a: (313) OMT, Van Dissel maart+mei 2020 + Feit 313: Nalaten door OMT, Van Dissel in maart-mei 2020 Intelleel, en daarna, te adviseren het dragen van mondkapjes door personeel en bezoekers van bouwmarkten en tuincentra.

Toelichting: Met name in supermarkten is de 1,5 meter afstand niet goed te handhaven, waardoor, zeker omdat het binnenruimte betreft, de kans op besmetting van elkaar reëel is. Duidelijk is wetenschappelijk inconsistent om uiteindelijk in mei 2020 mondkapjes in het OV te adviseren, nota bene met een boete versterkt, de argumenten daarvoor niet te gebruiken voor een advies tot mondkapjes ook in bouwmarkten en tuincentra.

DVM - Tussenevaluatie Handelen RIVM Nederland Coronavirus uitbraak (jan-mei 2020) Versie 2.0, 3 augustus 2020



18 augustus 2020

Resultaat tweede experiment: mondkapjes hebben geen effect

Het tweede mondkapjesexperiment in Amsterdam en Rotterdam leidt logischerwijs tot dezelfde resultaten als het eerste experiment. De veiligheidsregio's schrijven hierover in een nieuwsbericht van 11 september 2020: "Uit wetenschappelijk onderzoek is gebleken dat het dragen van een mondkapje in de openbare ruimte geen effect heeft op het houden van de 1,5 meter afstand. Het dragen van een mondkapje lijkt ook geen vrijbrief om de 1,5 meter regel overtreden."

Vrijdag 11 september 11.00 uur, gezamenlijk bericht van VRR en VRAA

NIUWSBERICHT**Onderzoek: mondkapjesplicht levert geen waarneembaar gedragseffect op naleving 1,5m**

Wetenschappelijk onderzoek heeft aangetoond dat het dragen van een mondkapje in de openbare ruimte geen effect heeft op het houden van de 1,5 meter afstand. Tegelijkertijd laat het ook zien dat mensen met een mondkapje de 1,5 meter niet zeker schenden. Oftewel, het dragen van een mondkapje lijkt ook geen vrijbrief te zijn om de 1,5 meter regel te overtreden. Het onderzoek naar effecten op gedrag is uitgevoerd door het Nederlands Studiecentrum Criminaliteit en Rechtshandhaving (NSCR). Mogelijke effecten op gezondheid of verspreiding van het virus zijn niet onderzocht.

Rotterdam en Amsterdam experimenteerden met het invoeren van een mondkapjesplicht op drukke en krappe plekken van 5 tot 31 augustus. Door een snelle stoppage van het aantal besmettingen in beide steden in een tijd waar veel versoepelingen waren ingevoerd, werd in beide veiligheidsregio's de urgentie gevoeld lokale maatregelen te treffen. **Beide regio's lieten eerst uitproberen** om drastischer maatregelen zoals het afsluiten van winkelsstraten of het beperken van horsecarjées te voorkomen. Het werd in juli op sommige plekken in de twee steden zo druk dat mensen de 1,5 meter afstand steeds moeilijker konden houden.

Het onderzoeksrapport laat ook zien dat de draagplicht geen invloed heeft gehad op de drukte in de onderzochte straten en gebieden. Wel: hoe drukker het is, hoe meer de 1,5 meter wordt geschonden. Maatregelen om de drukte te beheersen blijken dus zeer nuttig. Rotterdam en Amsterdam (en vele andere gemeenten in Nederland) werken al sinds maart met diverse vormen van crowd management om drukte te beperken en in goede banen te leiden. Op de plekken waar de mondkapjesplicht gold, gaan de gemeentes daar onverminderd mee door.

Wetenschappelijk onderzoek
Het NSCR heeft het onderzoek uitgevoerd door middel van het uitvoeren van observaties, draagbeurten door onderzoekers, scanbeurten via de sociale media. De resultaten zijn voor Rotterdam en Amsterdam hetzelfde.

Vervolg
Rotterdam en Amsterdam hebben het experiment volgens planning van 5 tot 31 augustus uitgevoerd. Veiligheidsregio Rotterdam-Rijnmond en Amsterdam-Amstelland hebben de onderzoeksresultaten gedeeld met de minister van VWS, het Veiligheidsberaad en met de gemeentes van beide steden.

11 september 2020

De veiligheidsregio's vervolgen: "Het onderzoeksrapport van de NSCR laat zien dat de draagplicht geen invloed heeft gehad op de drukte in de onderzochte straten en gebieden. Wel: hoe drukker het is, hoe meer de 1,5 meter wordt geschonden. Maatregelen om de drukte te beheersen (crowd control) blijken dus wel nuttig. De resultaten zijn voor Rotterdam en Amsterdam hetzelfde." Kortom: mondkapjes hebben geen effect op de afstandsmaatregel en de vraag van het kabinet is hiermee opnieuw beantwoord.

Conclusies van het wob-onderzoek

Het kabinet sorteerde al in mei 2020 voor op een mogelijke draagplicht. Niet vanuit een medisch perspectief maar om het gedrag van Nederlandse burgers te beïnvloeden. De Gedragsunit Corona kon hiervoor geen onderbouwing geven vanuit bestaande literatuur. Daarom werden twee experimenten uitgevoerd door het Studiecentrum Criminaliteit en Rechtshandhaving.

Tijdens het eerste experiment analyseerde het Studiecentrum het gedrag van burgers met behulp van CCTV beelden. De conclusie van dit onderzoek was duidelijk: mondkapjes hebben geen enkel effect op het handhaven van de 1,5 meter maatregel. Desondanks wilden de veiligheidsregio's Amsterdam en Rotterdam, onder aanvoering van Femke Halsema, verder experimenteren. Het onderzoek van Halsema onderschreef vervolgens de conclusies van het eerste experiment.

62

From: Grapperhaus, F.B.J. - BD/AL
Sent: Sunday 11 October 2020 15:10:32
To: 10.2.e - BD/DGC/CV; 10.2.e - BD/ks; 10.2.e -
BD/DRC/CV
Cc: 10.2.e - BD/NCTV
Subject: RE: Juridisch dossier avondklok

10.2.e, 10.2.e 10.2.e.
Inmiddels komt het verplichte mondkapje als een tanker op ons af.
We moeten op de kortst mogelijke termijn juridisch kunnen zeggen hoe ogv welke wet en grondslag.
Mooie klus toch?
Groet
Ferd

Verzonden met BlackBerry Work
(www.blackberry.com)

11 oktober 2020

Ondanks gebrek aan wetenschappelijk bewijs schrijft Minister Grapperhaus op 11 oktober 2020: "Het (landelijk) verplichte mondkapje komt als een tanker op ons af. We moeten zo snel mogelijk juridisch kunnen zeggen hoe, met welke wet en grondslag. Mooie klus toch?" Ondanks de overtuigende hoeveelheid onderzoeksresultaten, gaat de Nederlandse overheid vanaf het najaar een landelijke mondkapjesplicht invoeren. In de wob-documenten heeft het onderzoeksteam geen enkele steekhoudende onderbouwing aangetroffen voor de draagplicht.

10 Comments



Write a comment...



Lalaland Apr 17 Liked by [Daniël van der Tuin](#)

Nou, nu nog de bevestiging dat voortijd bekend was dat de vaccinatie schadelijker zijn dan welke ziekte ook, onnodig en dodelijk.

En dat corona geen nieuwe ziekte is, maar gewoon sinds mensenheugenis een neusverkoudheid is en een griep is.

Moge duidelijk zijn dat er 2 jaar lang testen zijn uitgevoerd op de bevolking die alleen in strijd zijn met elke internationale wet of verdrag.

Ook moge duidelijk zijn dat reeds ruim voortijd toe gewerkt is aan deze wereldwijde corona hoax om de testen uit te kunnen voeren.

4 [Reply](#) [Collapse](#)



JanenInge van Triest Apr 17 Liked by [Daniël van der Tuin](#)

Beerput na beerput in WOB documenten. WOB staat nu zeker voor Wanstaltig Openbaar Bestuur

4 [Reply](#) [Collapse](#)

[8 more comments...](#)

Correspondentie van de Rijksoverheid

Van: (10)(2e), (10)(2e).

Verzonden: zaterdag 2 mei 2020 13:54

Aan: (10)(2e), (10)(2e) (GVO)'; (10)(2e), (10)(2e) (FdP-GUEST); CoronaGedragsUnit; (10)(2e) @amc.uva.nl'; (10)(2e) @amsterdamumc.nl'; (10)(2e) @media-gezondheid.nl'; (10)(2e) @essb.eur.nl'; (10)(2e) @essb.eur.nl'; (10)(2e) @ggdgelderlandzuid.nl'; (10)(2e) @radboudumc.nl'; (10)(2e) @uva.nl'; (10)(2e) @uu.nl'; (10)(2e) @amsterdamumc.nl'; (10)(2e) @umcg.nl'; (10)(2e) @uva.nl'; (10)(2e) @uu.nl'

CC: (10)(2e), (10)(2e); (10)(2e), (10)(2e); (10)(2e), (10)(2e); (10)(2e), (10)(2e)

Onderwerp: RE: 2 vragen, waarvan 1 spoed over effect mondkapjesgebruik op compliance andere maatregelen

Beste (10)(2e), allen,

Ook ik ken geen nader onderzoek dat specifiek hierop gericht is, maar wil even het mogelijke placebo effect van mondkapjes inbrengen, dat we niet moeten onderschatten omdat

- 1) mensen toch erg van overtuigd zijn dat mondkapjes beschermen en dit gevoed wordt door suggesties in de media, beleid in andere landen, oproep zorgprofessionals etc en
- 2) het dragen van een mondkapje het (meest zichtbare) bewijs/teken van Corona is geworden en daarmee dus ook automatisch geassocieerd wordt met Corona en mensen hieraan herinnert, bv om de 1,5 meter aan te houden. Ik zou bijvoorbeeld erg geïnteresseerd zijn in onderzoek wat laat zien dat mensen zich juist beter aan de 1,5 meter houden als ze iemand tegenkomen met een mondkapje, omdat ze op dat moment hier juist aan herinnerd worden, en tenslotte
- 3) het dragen van een mondkapje cultuuroverstigend geassocieerd wordt met ziektes en infecties en daarmee deze conditionering (associatie van mondkapje met maatregelen) erg sterk kan zijn.

Mijn hypothese zou dan ook zijn dat in landen waar mensen mondkapjes dragen, men zich juist meer houdt aan de maatregelen omdat mensen er continu aan herinnerd worden en ze in de loop der tijd hierin geconditioneerd

2 mei 2020

Correspondentie van de Rijksoverheid

From: (10)(2e) <(10)(2e)@uu.nl>
Sent: zondag 16 augustus 2020 12:53
To: (10)(2e) <(10)(2e)@rivm.nl>; (10)(2e) <(10)(2e)@uva.nl>; (10)(2e) <(10)(2e)@uva.nl>
Subject: Re: Results

Beste (10)(2e)

Dank voor de gelegenheid om mee te lezen en feedback te geven op het concept van het verslag van de onderzoeksresultaten van de analyse van camerabeelden van het gedrag van gebruikers van mondkapjes.

Dit is interessant onderzoek, mooi uitgevoerd, met belangrijke bevindingen die toevoegen aan wat we al weten (los van de aard van de bevindingen).

Mij vielen een aantal dingen op waar de onderzoekers wellicht nog eens naar kunnen kijken; zie hieronder.

Groet,
(10)(2e)

(10)(2g)

Van: (10)(2e)
Datum: 14 augustus 2020 om 21:35:28 CEST
Aan: (10)(2e); (10)(2e)
Onderwerp: FW: observatiestudie mondkapjes & input SG overleg maandag over gedrag in de strijd tegen het coronavirus

Fyi
From: (10)(2e)
Sent: vrijdag 14 augustus 2020 21:29
To: (10)(2e); (10)(2e); (10)(2e); (10)(2e)
Cc: (10)(2e); (10)(2e); CoronaGedragUnit
Subject: observatiestudie mondkapjes & input SG overleg maandag over gedrag in de strijd tegen het coronavirus

Dubbel

(10)(2e) (10)(2e)

(10)(2e) (10)(2e)

(10)(2e)

16 augustus 2020

Correspondentie van de Rijksoverheid

Van: (10)(2e) <(10)(2e)@rivm.nl>

Datum: 14 augustus 2020 om 21:29:13 CEST

Aan: (10)(2e) <(10)(2e)@minvws.nl>, (10)(2e) | (10)(2e) | (10)(2e) <(10)(2e)@minvws.nl>

CC: (10)(2e) <(10)(2e)@minvws.nl>, (10)(2e) <(10)(2e)@minvws.nl>,
CoronaGedragsUnit <(10)(2e)@rivm.nl>

Onderwerp: observatiestudie mondkapjes & input SG overleg maandag over gedrag in de strijd tegen het coronavirus

Dag (10)(2e) & (10)(2e)

1. Het Nederlands Studiecentrum Criminaliteit en Rechtshandhaving (NSCR) heeft met co-financiering van ons een klein onderzoekje gedaan naar effecten van mondkapjesgebruik op risicovol gedrag met behulp van CCTV videobeelden. Hierbij is gekeken hoe mensen mondkapjes gebruiken in settings waar dit op vrijwillige basis gebeurt. En in hoeverre ze bij gebruik van mondkapjes meer of minder afstand houden en meer of minder hun gezicht aanraken. CCTV beelden uit de binnenstad van Amsterdam zijn hiervoor gebruikt van eind mei / begin juni. Vanmiddag hebben we de resultaten ontvangen:

Hoe: 80% gebruikt het mondkapje zoals bedoeld (mond & neus bedekt); 8% bedekt of mond of neus en bij 12% hangt het mondkapje onder de kin, op het voorhoofd of anderszins. Gender en leeftijd spelen hierbij geen rol.

Gezicht aanraken: geen indicatie dat het gezicht en in het bijzonder ogen, neus en mond vaker worden aangeraakt door mensen die een mondkapje dragen, eerder het tegenovergestelde lijkt het geval te zijn, edoch verschillen zijn minimaal.

Afstand houden: geen verschil tussen mensen met en zonder mondkapjes in mate waarin het lukt om 1,5m afstand te houden: niet meer en ook niet minder. Afstand houden wordt vooral beïnvloed door hoe druk het ergens is. Geen verschillen in leeftijd en gender in de mate waarin afstand houden lukt.

Dus geen aanwijzingen uit deze Nederlandse observationele studie dat mensen bij vrijwillig mondkapje gebruik onvoorzichtiger worden in afstand houden en gezicht aanraken. Plus dat grootste deel van de mensen die een mondkapje vrijwillig draagt deze ook op de juiste wijze op het gezicht draagt.

Deze resultaten zullen a.s. woensdag door het NSCR worden gepubliceerd, en naar verwachting ook de pers worden opgepikt. Ook wij zijn voornemens om de resultaten op rivm.nl te publiceren (op de pagina's met resultaten van gedragsonderzoek). Diverse journalisten zijn via NSCR al op de hoogte dat deze studie werd uitgevoerd en hebben

14 augustus 2020

Correspondentie van de Rijksoverheid

To: (10)(2e) (10)(2e)@nscr.nl]
Cc: CoronaGedragUnit[(10)(2e)@rivm.nl]; (10)(2e)@soc.ku.dk; (10)(2e)@soc.ku.dk]
From: (10)(2e)
Sent: Tue 8/18/2020 4:37:19 AM
Subject: Doorst: Results
Received: Tue 8/18/2020 4:37:20 AM

Hi (10)(2e)

Here are also the comments from (10)(2e). His comments are very much supportive of John's comments. And some more food for thought for next studies.

And yes, it is preferable that a more extended version will be available to be shared with press & public.

Your conclusion from this study that there is no indication of more or less distancing with voluntary use of non-medical face masks in public space is an important one as well as distancing and hygiene are the most important behavioral rules we have nowadays for those not infected nor having been in close contact with infected cases.


Success!

(10)(2e)

18 augustus 2020

Correspondentie van de Rijksoverheid

40

 Ministerie van Justitie en Veiligheid

Minister van Justitie en Veiligheid

Directie Bestuursondersteuning
Turfmarkt 147
2511 DP Den Haag
Postbus 20301
2500 EH Den Haag
www.rijksoverheid.nl/jenv

T 070 [redacted]
F 070 [redacted]

Datum
6 juli 2020

Ons kenmerk
[redacted]

nota

1. Aanleiding
U heeft op vrijdagochtend 11.00 uur een overleg met een kleine afvaardiging van het Veiligheidsberaad. Nadien vindt een kort persmoment plaats. Onderstaande annotatie is opgesteld vóór uw telefonische overleg met [redacted] en [redacted]. U krijgt via Communicatie nog een spreeklijn over de uitkomsten van het overleg. Deze lijn bepaalt deels de inhoud van het overleg zelf.

2. Aanwezig
Vanuit Veiligheidsberaad: Hubert Bruls, Femke Halsema
Ambtelijk ondersteund door: [redacted] en [redacted]
Vanuit Rijkszijde zijn aanwezig: [redacted] en [redacted]

3. Agenda voor het overleg
Buiten reikwijdte [redacted]

3a. Algemeen beeld van oplopende besmettingen
Buiten reikwijdte [redacted]

3b. Mogelijkheden van mondkapjes in de openbare ruimte
Advies: U kunt het volgende in het gesprek aangeven:

- Afstand houden, de gedragsregels en de hygiëne maatregelen zijn dé aanpak in de strijd tegen corona.
- Het strikt blijven opvolgen van deze adviezen is een noodzakelijke voorwaarde voor het herenken van de transmissie.
- Het OMT adviseert geen algemeen gebruik van niet-medische mondkapjes in de publieke ruimte daar waar het mogelijk is anderhalve meter afstand te bewaren.
- Het besluit om mondkapjes verplicht te stellen in OV en taxi is aanvullend: daar waar de 1,5 meter afstand niet kan worden aangehouden en waar geen gezondheidscheck plaats kan vinden.
- Niet medische mondkapjes zijn niet ter bescherming van de drager zelf, maar van anderen om hem of haar heen

Pagina 1 van 12

Directie Bestuursondersteuning

Datum
6 juli 2020

Ons kenmerk
[redacted]

- Het kabinet ziet geen reden daarvan af te wijken omdat het geen reëel alternatief is en nog sterker er een risico is dat de 1,5 m regel daarmee in het geding komt.
- Ik snap uw zorg over de handhaafbaarheid van de 1,5 meter. Die vraagt echter om andere oplossingen dan de oplossing van een mondkapje
- Uw zorg richt zich specifiek op jongeren die feesten en drinken. (Evt: Ik kan me voorstellen dat we daarom nog eens kijken of we expertise in kunnen zetten, welke maatregelen daar een oplossing voor beiden, bijvoorbeeld via een aanvullend verzoek aan de Gedragsunit van het RIVM)

NB. Ambtelijk is vernomen dat Femke Halsema zal suggereren in Amsterdam te experimenteren met mondkapjes. Het advies is echter bovenstaande spreeklijn aan te houden

Achtergrondinformatie OMT-advies mondkapjes openbare ruimte

- Het OMT benadrukt het belang van volhouden van de algemene adviezen zoals het handhaven van de anderhalve meter afstand tussen mensen, (hand-)hygiënische adviezen en het thuisblijven bij de geringste luchtwegklachten.
- Het strikt blijven opvolgen van deze adviezen is een noodzakelijke voorwaarde voor het beperken van de transmissie van COVID-19 en voor het succesvol verlopen van versoepeling van de maatregelen in de transitiefase.
- Medische mondkapjes dienen gereserveerd te worden voor gebruik in de zorg en dienen gebruikt te worden conform de vigerende adviezen.
- Voor contactberoepen heeft het OMT een afwegingskader vastgesteld waarbij essentieel is dat naast strikte hygiëne maatregelen triage wordt toegepast
- Het OMT adviseert geen algemeen gebruik van niet-medische mondkapjes in de publieke ruimte daar waar het mogelijk is anderhalve meter afstand te bewaren.
- Het OMT steit dat gebruik van niet-medische mondkapjes echter overwogen kan worden in die omstandigheden waar het niet mogelijk is om anderhalve meter afstand te houden en triage toe te passen.

Achtergrondinformatie Brief Amsterdam aan OMT

- Buiten reikwijdte [redacted]
- Daarnaast geeft vz OMT aan op dit moment geen redenen te zien om af te wijken van de eerder gegeven adviezen over gebruik mondkapjes en geen expertise te hebben op handhavingsvraagstukken.
- Buiten reikwijdte [redacted]

Pagina 2 van 12

6 juli 2020

The screenshot shows the AD website interface. At the top, there is a navigation bar with categories: NIEUWS, REGIO, SPORT, SHOW, VIDEO, PODCAST, FUN, and a search icon. On the right side of the navigation bar are buttons for 'ABONNEREN' and 'INLOGGEN'. Below the navigation bar is a large image of a police officer in a yellow high-visibility vest with 'HANDHAVING' written on it, standing on a city street in Amsterdam at night. People are walking in the background, some wearing face masks. To the right of the main image is a sidebar with a 'TIJDSCHRIFT' (Magazine) promotion and a 'NET BINNEN' (Just in) section listing several news items with their timestamps and premium status. Below the sidebar is a button that says 'BEKIJK ALLE ARTIKELN'. The main headline below the image reads: 'Boa's in Amsterdam grijpen in: 148 boetes voor niet dragen mondkapjes'. Below the headline is a sub-headline: 'Gemeentelijke handhavers hebben vandaag 148 boetes uitgeschreven voor het niet dragen van een mondkapje. Dat meldt de woordvoester van...'. To the right of the main article is a smaller image of a man smiling and holding up a smartphone, with the text 'Speel hier gratis puzzels,' below it.

AD NIEUWS REGIO SPORT SHOW VIDEO PODCAST FUN Q ABONNEREN INLOGGEN

Mu eerste 2 weken gratis TIJDSCHRIFT Je favoriete tijdschriften bij de hand >

NET BINNEN

- 21:00 PREMIUM Minder angstige patiënt én een chirurg die beter opereert: muziek in de...
- 20:58 Bieb universiteit Maastricht ontruimd om mogelijk explosief
- 20:27 Flink wat zon en aangename temperaturen tijdens paasweekend
- 19:53 PREMIUM Deze school versoepelt eenmalig eisen voor leerlingen: 'Móeten iet...
- 19:15 WHO: Mogelijk verband tussen corona en hepatitis bij kinderen

BEKIJK ALLE ARTIKELN

▲ Handhavers aan het werk in Amsterdam. © Jean-Pierre Jans

Boa's in Amsterdam grijpen in: 148 boetes voor niet dragen mondkapjes

Gemeentelijke handhavers hebben vandaag 148 boetes uitgeschreven voor het niet dragen van een mondkapje. Dat meldt de woordvoester van...

Speel hier gratis puzzels,

23 augustus 2020

Correspondentie van de Rijksoverheid

-a: (313) OMT, Van Dissel maart-mei 2020 • Feit 313: Nalaten door OMT, Van Dissel in maart-mei 2020 initieel, en daarna, te adviseren het dragen van **mondkapjes door personeel en bezoekers van bouwmarkten en tuincentra**.

Toelichting: Met name in supermarkten is de 1,5 meter afstand niet goed te handhaven, **waardoor, zeker omdat het binnenruimte betreft, de kans op besmetting van elkaar reëel is.**

Duidelijk is wetenschappelijk inconsistent om uiteindelijk in mei 2020 mondkapjes in het OV te adviseren, nota bene met een boete versterkt, de argumenten daarvoor niet te gebruiken voor een advies tot mondkapjes ook in bouwmarkten en tuincentra.

83

DVM - Tussenevaluatie Handelen RIVM Nederland Coronavirus uitbraak (jan-mei 2020)
Versie 2.0, 3 augustus 2020

Van: (10)(2e) <(10)(2e)@rivm.nl>

Verzonden: dinsdag 18 augustus 2020 12:50

Aan: (10)(2e) <(10)(2e)@minvws.nl>

CC: (10)(2e) <(10)(2e)@minvws.nl>, (10)(2e) <(10)(2e)@rivm.nl>

Onderwerp: RE: Contact RIVM over amvb veilige afstand

Ha (10)(2e)

Zoals je weet is harde wetenschappelijke onderbouwing voor 1,5 m is bescheiden. Ik denk dat internationale adviezen (WHO / ECDC) en vergelijking met landen om ons heen nog wel een belangrijk toegevoegd argument is. Vanwege vakanties Ik moet even kijken wie hier in huis het beste mee kan kijken. Maar dank dat je het vast onderhands doorstuurt.

(10)(2e)

Ik zet (10)(2e) in de cc die in die periode de dossiers behandelt.

Veel groet

(10)(2e)

18 augustus 2020

11 september 2020

Vrijdag 11 september 11.00 uur, gezamenlijk bericht van VRR en VRAA

NIEUWSBERICHT

Onderzoek: mondkapjesplicht levert geen waarneembaar gedragseffect op naleving 1,5m

Wetenschappelijk onderzoek heeft aangetoond dat het dragen van een mondkapje in de openbare ruimte geen effect heeft op het houden van de 1,5 meter afstand. Tegelijk laat het ook zien dat mensen met een mondkapje de 1,5 meter niet vaker schenden. Oftewel, het dragen van een mondkapje lijkt ook geen vrijbrief te zijn om de 1,5 meter regel te overtreden. Het onderzoek naar effecten op gedrag is uitgevoerd door het Nederlands Studiecentrum Criminaliteit en Rechtshandhaving (NSCR). Mogelijke effecten op gezondheid of verspreiding van het virus zijn niet onderzocht.

Rotterdam en Amsterdam experimenteerden met het invoeren van een mondkapjesplicht op drukke en krappe plekken van 5 tot 31 augustus. Door een snelle stijging van het aantal besmettingen in beide steden in een tijd waar veel versoepelingen waren ingevoerd, werd in beide veiligheidsregio's de urgentie gevoeld lokaal maatregelen te treffen. Het experiment werd uitgevoerd om drastischer maatregelen zoals het afsluiten van winkelstraten of het beperken van horecatijden te voorkomen. Het werd in juli op sommige plaatsen in de twee steden zo druk dat mensen de 1,5 meter afstand steeds moeilijker konden houden.

Het onderzoeksrapport laat ook zien dat de draagplicht geen invloed heeft gehad op de drukte in de onderzochte straten en gebieden. Wel: hoe drukker het is, hoe meer de 1,5 meter wordt geschonden. Maatregelen om de drukte te beheersen blijken dus zeer nuttig: Rotterdam en Amsterdam (en vele andere gemeenten in Nederland) werken al sinds maart met diverse vormen van crowd management om drukte te beperken en in goede banen te leiden. Op de plekken waar de mondkapjesplicht gold, gaan de gemeentes daar onverminderd mee door.

Wetenschappelijk onderzoek

Het NSCR heeft het onderzoek uitgevoerd door middel van het analyseren van camerabeelden, straatobservaties door veldwerkers, straatinterviews en focusgroepen. De resultaten zijn voor Rotterdam en Amsterdam hetzelfde.

Vervolg

Rotterdam en Amsterdam hebben het experiment volgens planning van 5 tot 31 augustus uitgevoerd. Veiligheidsregio Rotterdam-Rijnmond en Amsterdam-Amstelland hebben de onderzoeksresultaten gedeeld met de minister van VWS, het Veiligheidsberaad en met de gemeenteraden van beide steden.

From: Grapperhaus, F.B.J. - BD/AL
Sent: Sunday 11 October 2020 15:10:32
To: 10.2.e - BD/DGC-19; 10.2.e - BD/KS; 10.2.e -
BD/DRC/CV
Cc: 10.2.e - BD/NCTV
Subject: RE: Juridisch dossier avondklok

10.2.e, 10.2.e 10.2.e,

Inmiddels komt het verplichte mondkapje als een tanker op ons af.
We moeten op de kortst mogelijke termijn juridisch kunnen zeggen hoe ogv welke wet en
grondslag.
Mooie klus toch?
Groet
Ferd

Verzonden met BlackBerry Work
(www.blackberry.com)

11 oktober 2020

PRODUKTIE 23

(10)(2e) (10)(2e) (10)(2e)
 (10)(2e) @minjenv.nl
www.rijksoverheid.nl/jenv

Van: (10)(2e) 2 (10)(2e) - BD/PSC-19 <(10)(2e) @nctv.minjenv.nl>

Verzonden: dinsdag 11 augustus 2020 14:35

Aan: (10)(2e) <(10)(2e) @minvws.nl>; (10)(2e) @minvws.nl
 <(10)(2e) @minvws.nl>; (10)(2e) @minvws.nl <(10)(2e) @minvws.nl>; (10)(2e) @minvws.nl
 <(10)(2e) @minvws.nl>; (10)(2e) - BD/DRC <(10)(2e) @minjenv.nl>; (10)(2e)
 <(10)(2e) - BD/DJOA <(10)(2e) @minjenv.nl>; (10)(2e) - BD/DWJZ/JZW
 <(10)(2e) @minjenv.nl>; (10)(2e) - BD/DRB <(10)(2e) @minjenv.nl>; (10)(2e) - BD/AL
 <(10)(2e) @minjenv.nl>; (10)(2e) 10(10)(2e) (10)(2e) - BD/DJOA/JBOZ <(10)(2e) @minjenv.nl>;
 <(10)(2e) @om.nl> <(10)(2e) @om.nl>; (10)(2e) <(10)(2e) @brandweeraa.nl>;
 <(10)(2e) - BD/DWJZ/SBR <(10)(2e) @minjenv.nl>; (10)(2e) @minjenv.nl
 <(10)(2e) @minjenv.nl>; (10)(2e) @minvws.nl <(10)(2e) @minvws.nl>
CC: (10)(2e) BD/PSC-19 <(10)(2e) @minjenv.nl>; (10)(2e) - BD/PSC-19
 <(10)(2e) @minjenv.nl> (10)(2e) - BD/PSC-19 <(10)(2e) @minjenv.nl> (10)(2e)
 BD/DBO/ADVIES <(10)(2e) @minjenv.nl>

Onderwerp: RE SPOED: Calls om 15:00u en om 16:00u - acties operationaliseren verplichtende maatregelen Covid-19 - t.b.v. CALL 16:00u

Collega's,

Bijgaand de conceptbrief zoals zojuist van VWS ontvangen.

Zoals met een aantal van jullie gedeeld is er straks om 15:00u – mede n.a.v. overleg vanmiddag met de MP, en ministers van VWS en JenV - een call voorzien ter voorbereiding op de call om 16:00u met minister Grapperhaus. Dit met dezelfde deelnemers als vanmorgen om 09:00u (+OM).

Groet,

(10)(2e)

Van: (10)(2e) 2 (10)(2e) - BD/PSC-19

Verzonden: dinsdag 11 augustus 2020 12:18

Aan: (10)(2e) <(10)(2e) @minvws.nl>; (10)(2e) @minvws.nl
 <(10)(2e) @minvws.nl>; (10)(2e) @minvws.nl <(10)(2e) @minvws.nl>; (10)(2e) @minvws.nl
 <(10)(2e) @minvws.nl>; (10)(2e) - BD/DRC <(10)(2e) @minjenv.nl>; (10)(2e)
 <(10)(2e) - BD/DJOA <(10)(2e) @minjenv.nl>; (10)(2e) - BD/DWJZ/JZW
 <(10)(2e) @minjenv.nl>; (10)(2e) - BD/DRB <(10)(2e) @minjenv.nl>; (10)(2e) - BD/AL
 <(10)(2e) @minjenv.nl>; (10)(2e) 10(10)(2e) (10)(2e) - BD/DJOA/JBOZ <(10)(2e) @minjenv.nl>;
 <(10)(2e) @om.nl> <(10)(2e) @om.nl>; (10)(2e) <(10)(2e) @brandweeraa.nl>;

(10)(2e) - BD/DWJZ/SBR <(10)(2e) @minjenv.nl>; (10)(2e) @minienw.nl
 <(10)(2e) @minienw.nl>
 CC: (10)(2e):Bv(2e) - BD/PSC-19 <(10)(2e) @minjenv.nl>; (10)(2e) - BD/PSC-19
 <(10)(2e) @minjenv.nl>; (10)(2e) - BD/PSC-19 <(10)(2e) @minjenv.nl>

Onderwerp: SPOED - acties operationaliseren verplichtende maatregelen Covid-19 - t.b.v. CALL 16:00u

Urgentie: Hoog

Beste allen,

In vervolg op de call van vanochtend met minister Grapperhaus en diverse telefoongesprekken en overleggen over het operationaliseren van de mogelijkheid voor (vooralsnog selectieve) inzet van meer verplichtende maatregelen, bijgaand:

- . Een intern conceptmemo waarin de mogelijkheden kort zijn beschreven:
- . Een lijst met een 10-tal issues, die door het OM (in concept) zijn geïdentificeerd voor het uitvoeringsproces van quarantainemaatregelen en die wij hier met instemming van het OM delen.

Ten overvloede het dringende verzoek vertrouwelijk met deze gegevens om te gaan.

Proces

Om 16 uur is er een call met de minister van JenV met dezelfde deelnemers als vanmorgen (+OM) waarin voor alle issues helder moet zijn hoe deze 10 punten worden aangepakt of zullen worden aangepakt om start uitvoering mogelijk te maken met ingang van maandag 17 augustus. Zoals vanmorgen besproken bereidt iedereen dat voor zijn/haar organisatieonderdeel en in onderlinge afstemming voor.

Graag ontvangen we zo snel mogelijk, en liefst voor 14:30 uur een eerste terugkoppeling van hoe een en ander kan worden ingeregeld en hoe de punten die geïdentificeerd zijn zullen worden geïdentificeerd, waar mogelijk in korte bullets die input kunnen vormen voor het gesprek met de minister en de tekst van de brief van VWS; als er belangrijke blokkades zijn kunnen die nog tijdig worden geïdentificeerd voor de call van 16 uur met de minister.

VWS stuurt zo snel mogelijk een eerste concepttekst rond voor de Kamerbrief die vandaag nog uit zal gaan.

Betrokkenen

De betrokken in het proces zijn GGD, VR, OM, Rechtspraak, rechtsbijstand en uiteindelijk politie. Voor alle organisaties is nu een contactpersoon beschikbaar.

Suggestie voor verdeling te adresseren punten uit de conceptnotitie van het OM (dit vooral als handreiking voor zover het nog niet duidelijk zou zijn).

Issues 1, 2, 3, 4 en 5 gaan over VR en OM en hun onderlinge procesmatige samenwerking. Aan (VR) en (OM) het verzoek om deze punten in overleg tussen VR en OM te (doen) oppakken

Issue 6 en 7 (aanwijzing ziekenhuis) is vooral relevant voor VWS, RR en OM: verzoek aan (VWS) en DGRR om hier de lead op te nemen.

Issue 8: (VWS) zou hierover interne een mening moeten vormen, al dan niet in overleg met IGJ en daarover